DRAWING NO.	TITLE
W1	VALVE OPERATION
W2	WATER TRENCH DETAIL
W3	STANDARD VALVE AND BOX
W4	24" MANHOLE RING AND COVER
W5	WATERLINE LOWERING
W6	FIRE HYDRANTS, MAINS AND VALVES
W7A	STUB–OUT CONFIGURATIONS (1 OF 2)
W7B	STUB–OUT CONFIGURATIONS (2 OF 2)
W8	WATER SERVICE DETAIL
W9	5/8" – 1" WATER METER DETAIL
W10	1 1/2" – 2" WATER METER DETAIL
W11A	PRV IN RECTANGULAR VAULT (1 OF 2)
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W12	POLYETHYLENE WRAP
W13	INSULATORS
W14	TEMPORARY BLOWOFF FOR 12" AND SMALLER PIPE
W15	UTILITY ENCASEMENT DETAIL
W16	CONCRETE THRUST BLOCK DETAIL
W17	METER PIT AND CURB STOP PROTECTION
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W19	CASING PIPE DETAIL
W20	RESTRAINED PIPE LENGTHS
W21	GALVANIZED STEEL VENT PIPE
W22	AIR AND VACUUM VALVE DETAIL
W23	MECHANICAL JOINT RESTRAINT DETAIL
W24	COMBINATION FLANGED HARNESS LUG DETAIL
W25	JOINT RESTRAINT DETAIL
W26	FIRE HYDRANT GUARDS
W27	TAPPING TEE AND VALVE
W28	DOMESTIC WATER TAPPING DETAIL
W29	CROSSING STORM AND SANITARY SEWERS
W30	MARKER POST
W31	TYPICAL CUTOFF WALL FOR DITCH CROSSING
W32	2" AND LARGER DOMESTIC AND FIRELINE CONNECTIONS
W33A	TRACER WIRE (1 OF 2)
W33B	TRACER WIRE (2 OF 2)
W34	CONCRETE METER SUPPORTS
W35	PLASTIC STEP
W36	WATER AND SEWER SERVICE LOCATIONS
W37	CLAY OR CONCRETE CUT–OFF WALL
W38	WATER METER NOTES

INDEX OF WATER DETAILS

FIRESTONE COLORADO

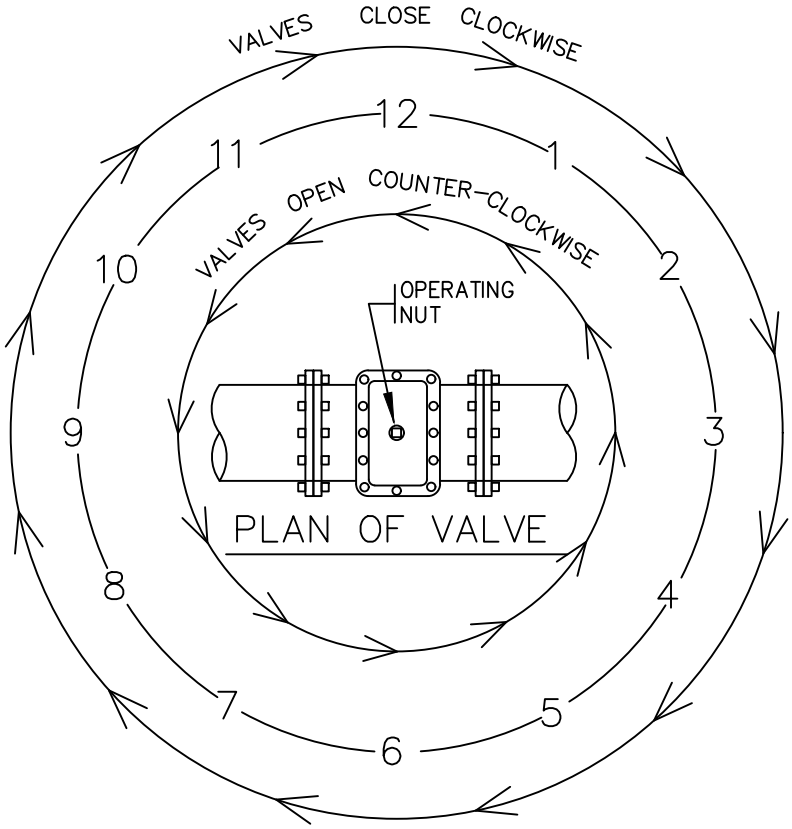
WATER CONSTRUCTION DRAWINGS

BY: JME

SCALE: NTS

DATE: 1/2020

DRAWING:

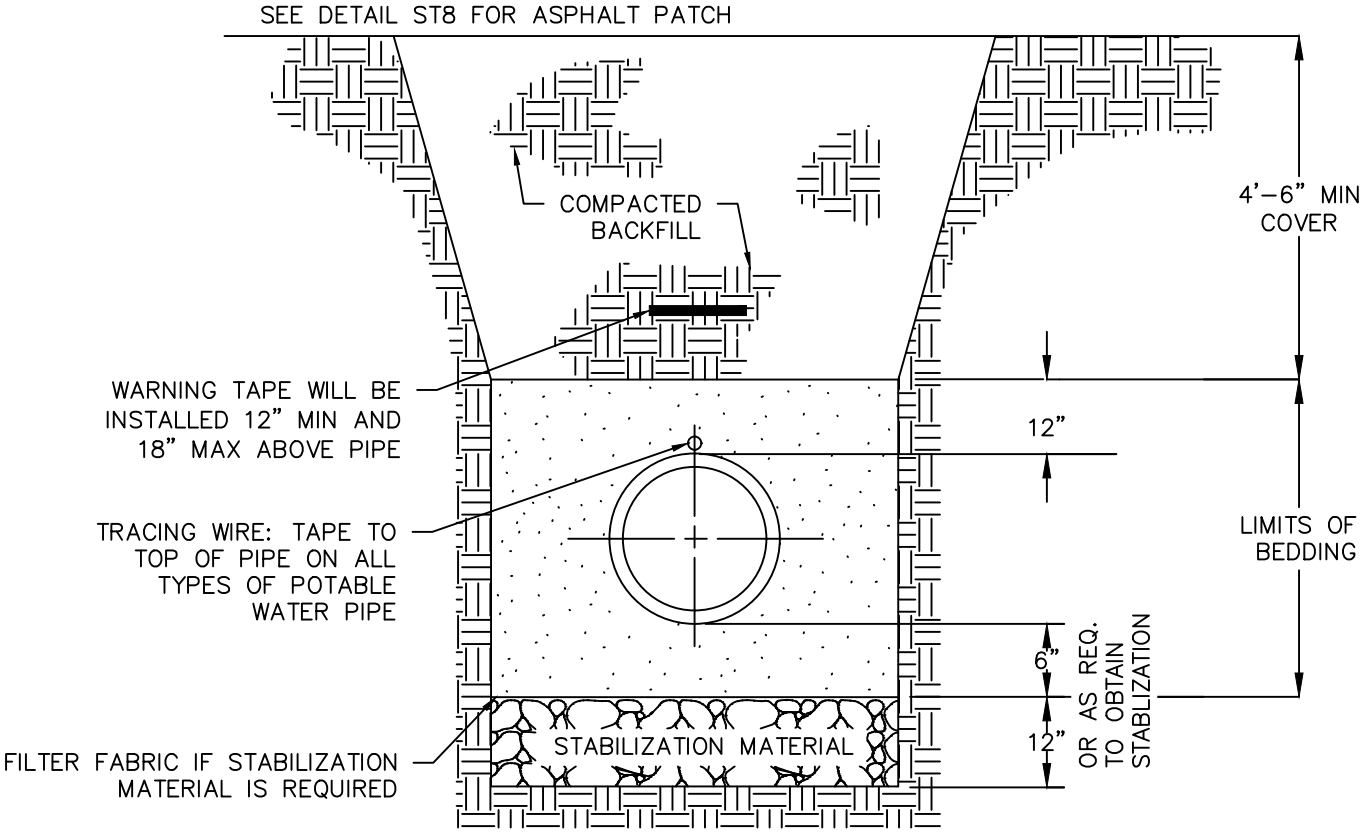


NOTES:

1. NORMALLY VALVES WITH A BLACK OPERATING NUT INDICATE A STANDARD FIRESTONE VALVE (OPEN LEFT).

VALVE OPERATION

FIRESTONE COLORADO	WATER CONSTRUCTION DRAWINGS	BY: JME SCALE: NTS DATE: 1/2020	DRAWING: W1



NOTES:

1. COMPACTION SHALL BE AS FOLLOWS: PIPE ZONE BEDDING 6" UNDER AND 12" OVER PIPE WILL REQUIRE 90% S.P.D. TRENCH ZONE ABOVE BEDDING MATERIALS, FULL TRENCH SECTION IN ROADWAY OR STREET R.O.W. LIMITS WILL REQUIRE 95% S.P.D. TRENCH ZONE ABOVE BEDDING MATERIALS, OUTSIDE OF STREET R.O.W. WILL REQUIRE 90% S.P.D.

2. 12 AWG. SINGLE STRAND INSULATED COPPER WIRE SHALL BE INSTALLED AS TRACING WIRE ABOVE ALL POTABLE WATER PIPES. THE WIRE SHALL BE CONNECTED AND COME TO THE SURFACE BEHIND THE FIRE HYDRANTS IN A TESTBOX.

3. FILTER FABRIC IS REQUIRED IF STABILIZATION MATERIAL IS USED. THE FABRIC SHALL BE INSTALLED AS SHOWN IN THE DETAIL.

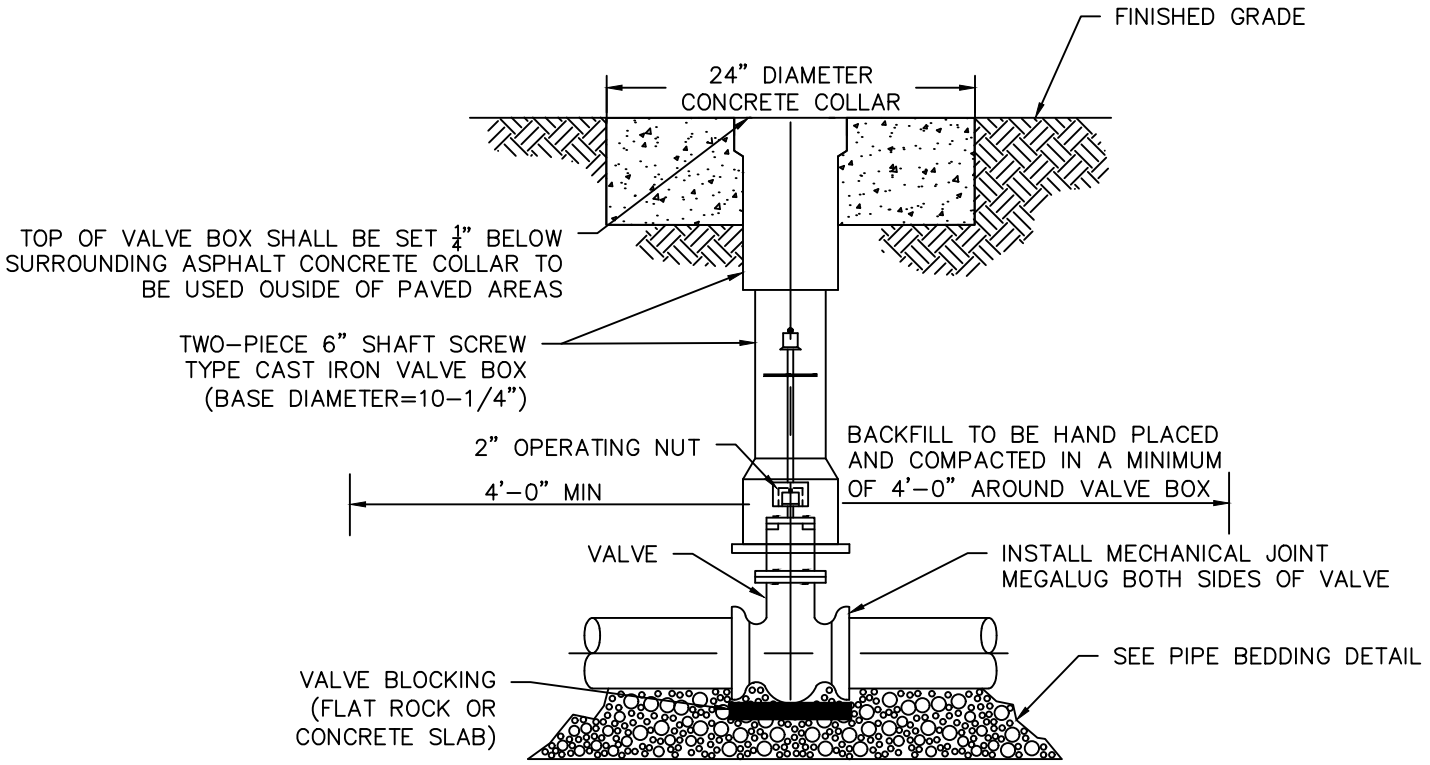
4. TRENCH TO BE BRACED OR SHEETED AS NECESSARY FOR THE SAFETY OF THE WORKMEN AND PROTECTION OF OTHER UTILITIES IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL SAFETY REGULATIONS.

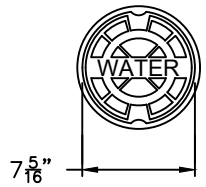
5. PIPE SHALL BE BEDDED FROM 6" BELOW THE BOTTOM OF THE PIPE TO 12" ABOVE THE TOP OF THE PIPE.

6. TRENCH WIDTH SHALL NOT BE MORE THAN 24" NOR LESS THAN 12" WIDER THAN THE LARGEST OUTSIDE DIAMETER OF THE PIPE.

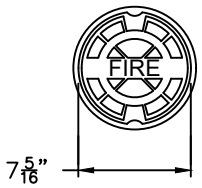
WATER TRENCH DETAIL

FIRESTONE COLORADO	WATER CONSTRUCTION DRAWINGS	BY: JME SCALE: NTS DATE: 1/2020	DRAWING: W2



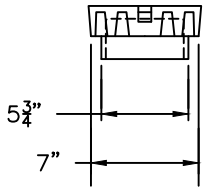


POTABLE VALVE BOX COVER PLAN

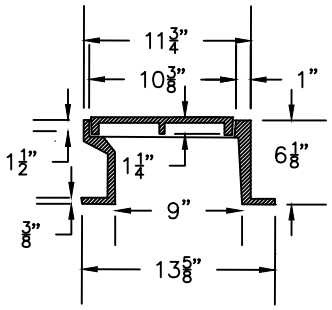


FIRE VALVE BOX COVER PLAN

NON-POTABLE VALVE BOX COVER PLAN



POTABLE & FIRE VALVE BOX COVER ELEVATION

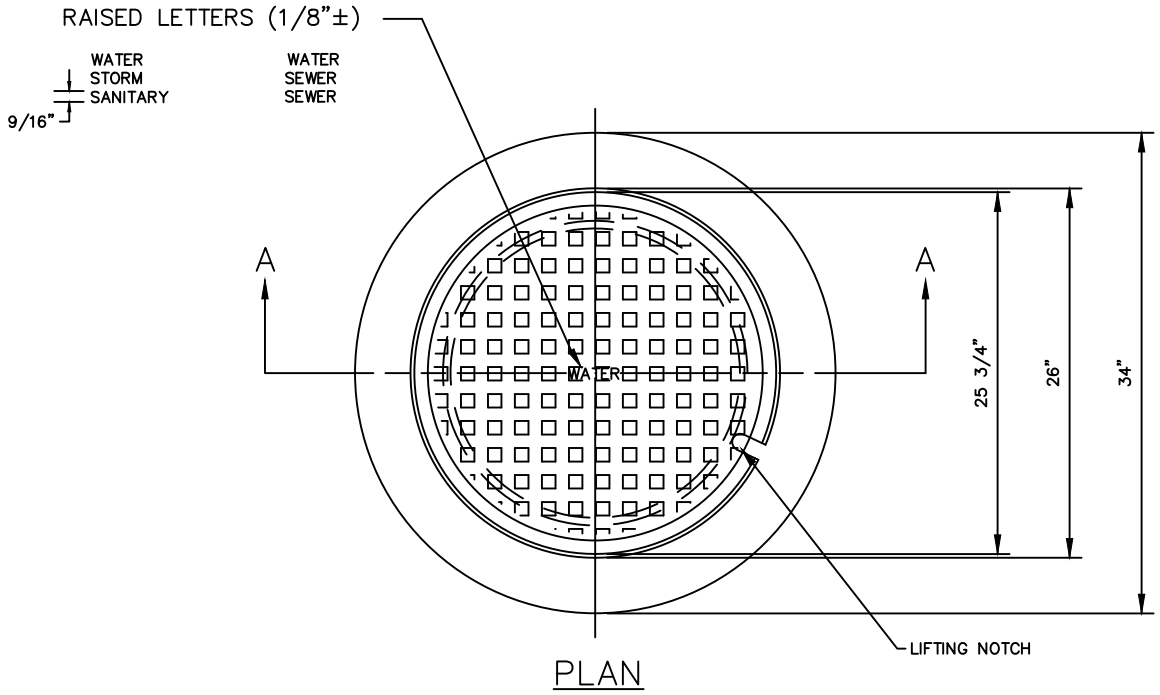


NON-POTABLE VALVE BOX COVER ELEVATION

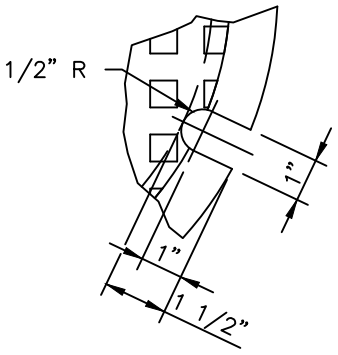
NOTES:
1. POTABLE & FIRE VALVE BOX LID RESTS INSIDE THE UPPER VALVE BOX SECTION.
2. NON-POTABLE VALVE BOX LID SLIDES OVER THE TOP OF THE UPPER VALVE BOX SECTION.
3. NON-POTABLE, WATER OR FIRE CAST IN TOP OF APPROPRIATE VALVE BOX COVER.
4. VALVE BOX SHALL NOT BE SUPPORTED BY WATER LINE.
5. VALVE BOX TO BE PLUMB AND CENTERED OVER NUT.
6. UTILIZING A VALVE BOX ALIGNMENT DEVICE IS OPTIONAL.
7. IF 2" OPERATING NUT IS MORE THAN 6' BELOW FINISHED GRADE, A VAULT NUT EXTENDER SHALL BE INSTALLED TO PUT THE VALVE NUT AT AN ELEVATION OF 4' BELOW FINISHED GRADE.

STANDARD VALVE AND BOX

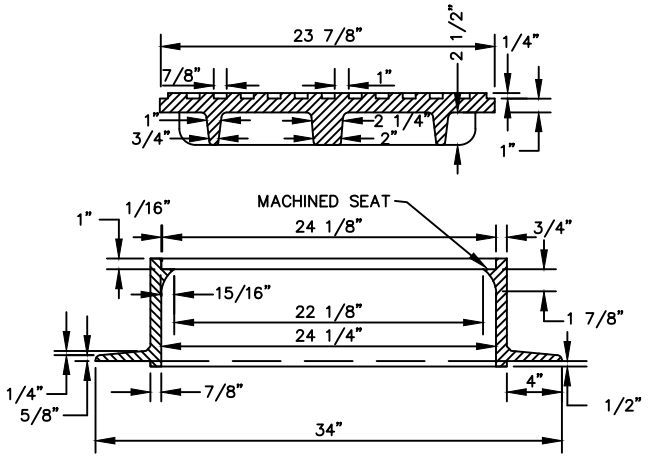
FIRESTONE COLORADO	WATER CONSTRUCTION DRAWINGS	BY: JME SCALE: NTS DATE: 1/2020	DRAWING: W3



PLAN



LIFTING NOTCH



SECTION A–A

NOTES:

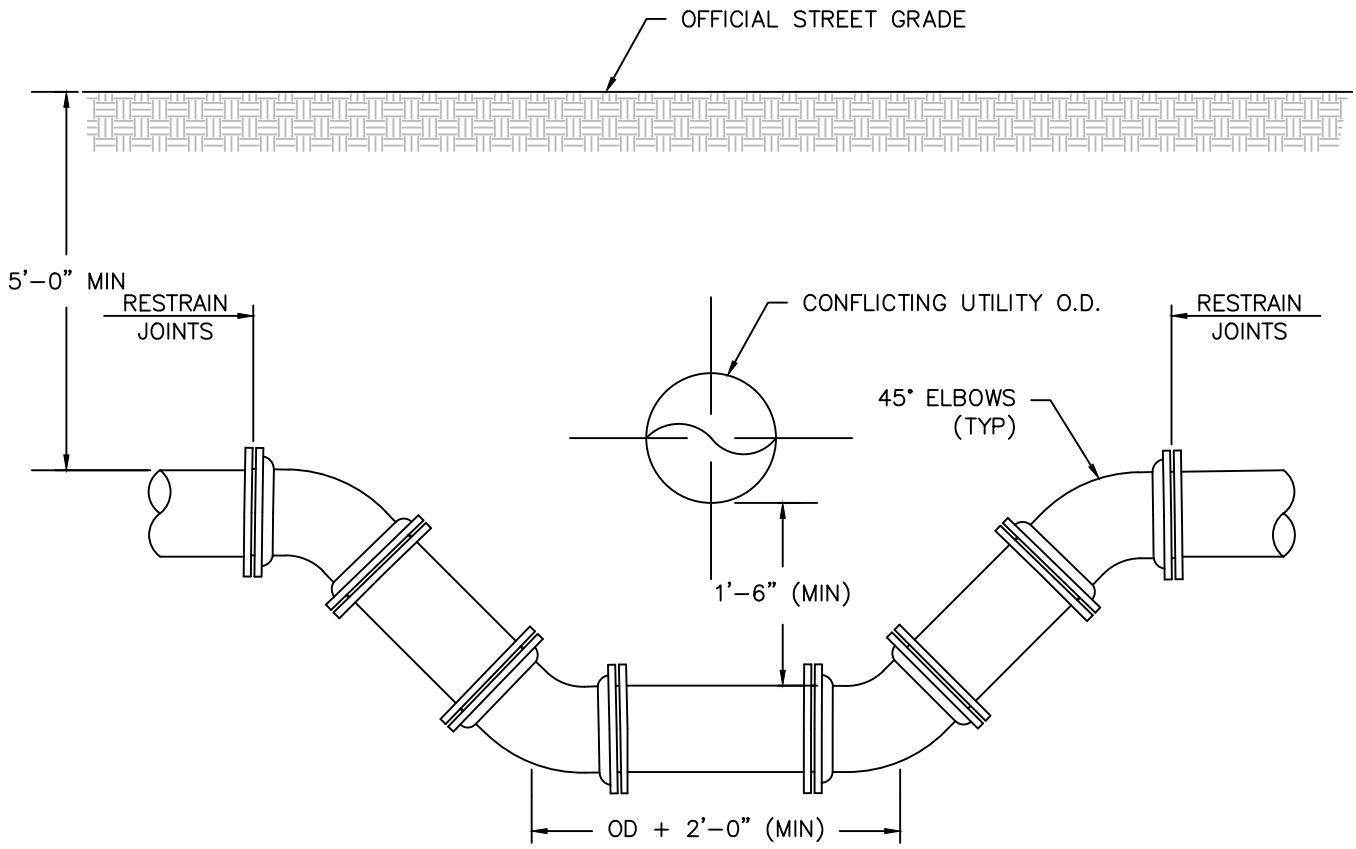
1. CASTING SPECIFICATIONS: ASTM A–48 WITH A MINIMUM TENSILE STRENGTH OF 25 KSI (CLASS 25).
2. ALL CASTINGS TO BE DIPPED IN ASPHALT BASE PAINT (OR APPROVED EQUAL).
3. CASTINGS SHALL BE AS SPECIFIED BELOW OR APPROVED EQUAL:

MANUFACTURERS	CAT. #
NEENAH	R–1706
CASTINGS, INC.	MH–400–24 C.I.
HUTCHINSON FDRY. & STL. INC.	MH–400

4. ALL NEW MANHOLES MUST INCLUDE A PLASTIC OR VINYL TAG ATTACHED TO THE TOP STEP STATING THE FOLLOWING: "CAUTION CONFINED SPACE; ENTRY PERMIT REQUIRED".

24" MANHOLE RING AND COVER

FIRESTONE COLORADO	WATER CONSTRUCTION DRAWINGS	BY: JME SCALE: NTS DATE: 1/2020	DRAWING: W4



NOTES:

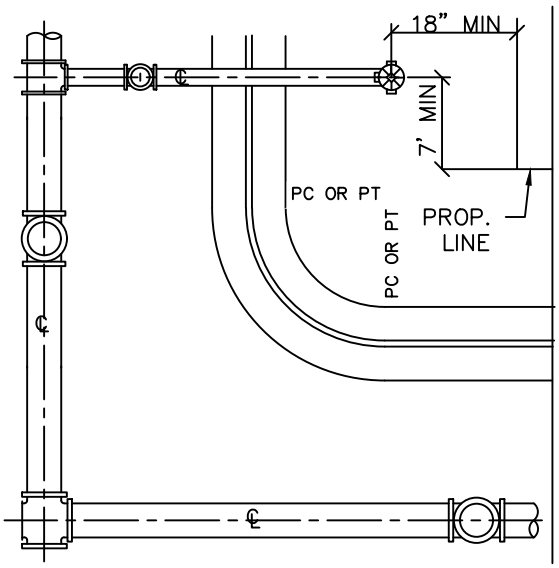
1. LOWERING OF THIS TYPE WILL BE RESTRAINED BY MEANS OF THRUST BLOCKING AND MEGALUGS OR RODDING.
2. FOR SIZING INFORMATION OF THRUST BLOCKS REFER TO THRUST BLOCK DETAILS.
3. WHEN RESTRAINING PIPE BY MEANS OF RODDING JOINTS, ¾" TIE RODS, NUTS AND WASHERS WILL BE USED AND ARE TO BE MADE OF "COR–TEN" STEEL AS PER A.S.T.M. A242.
4. FOR FURTHER INFORMATION ON RODDING OF JOINTS REFER TO TABLE 1.
5. ALL METALLIC PIPE, FITTINGS AND APPURTENANCES WILL BE WRAPPED IN POLYETHYLENE.
6. REQUIREMENTS FOR LARGER THAN 12" DIAMETER PIPE WILL BE DETERMINED ON A CASE BY CASE BASIS.
7. LENGTH OF EXTENSION OF PIPE AND RESTRAINED JOINTS SHALL BE IN ACCORDANCE WITH THE ENGINEERING STANDARDS.
8. CATHODIC PROTECTION SHALL BE AS REQUIRED IN ACCORDANCE WITH THE ENGINEERING STANDARDS.
9. A BORED CROSSING MAY BE REQUIRED BY THE ENGINEER.

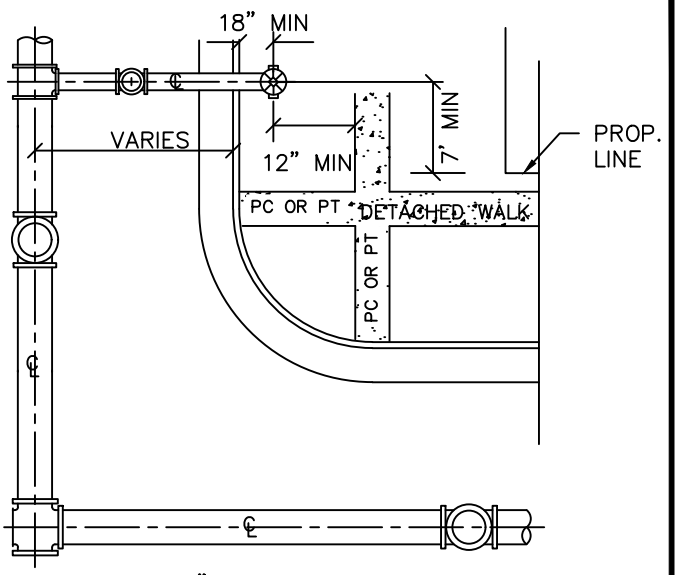
Pipe Size	Test Pressure (psi)	Min. Number of Tie Rods
10" and Under	150	2
	200	2
12"	150	2
	200	4

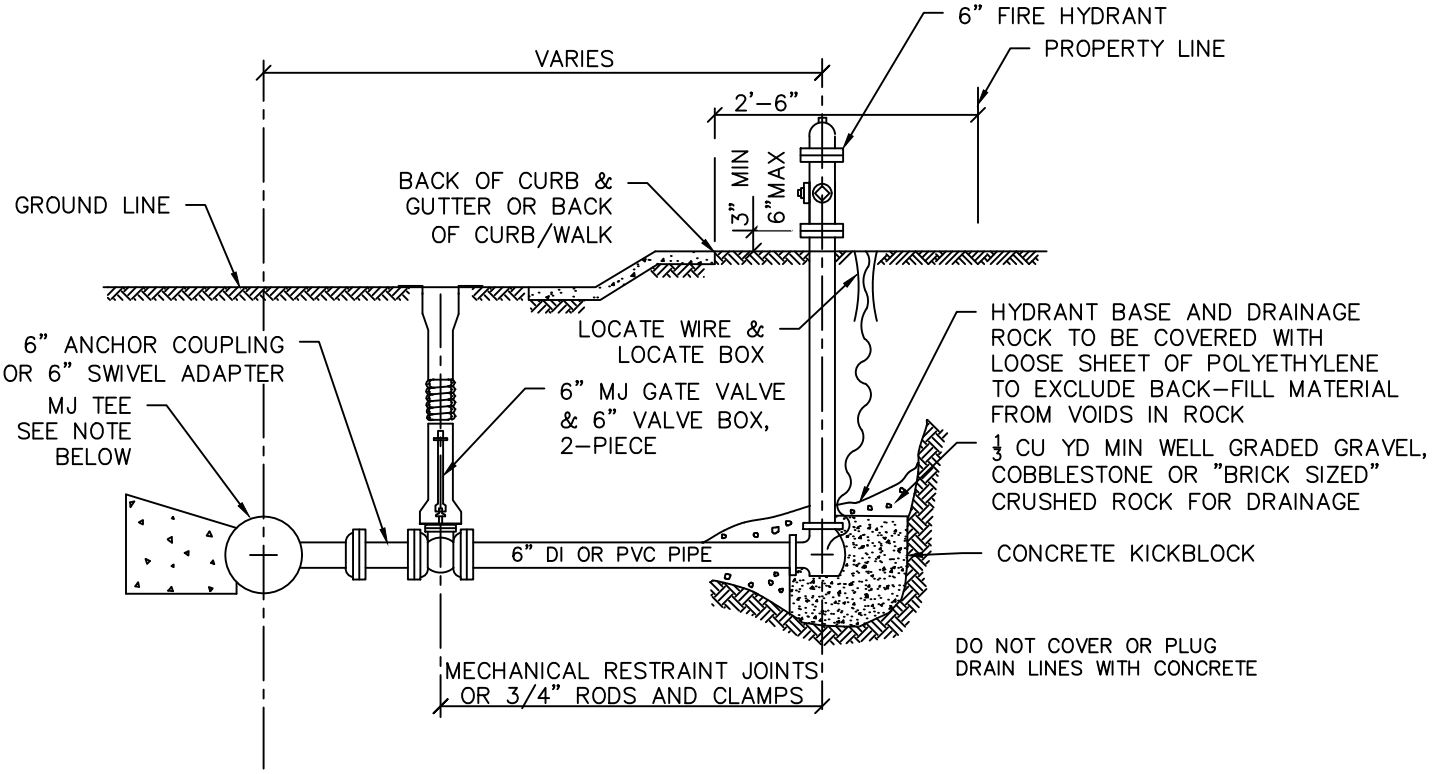
TABLE 1

WATERLINE LOWERING

FIRESTONE COLORADO	WATER CONSTRUCTION DRAWINGS	BY: JME SCALE: NTS DATE: 1/2020	DRAWING: W5





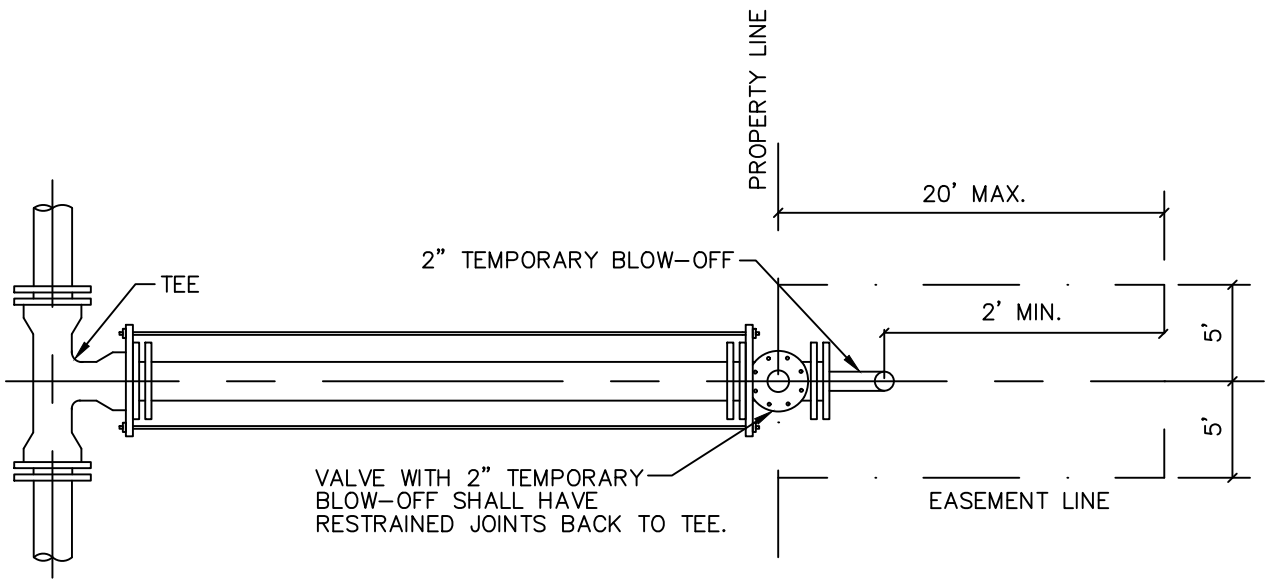


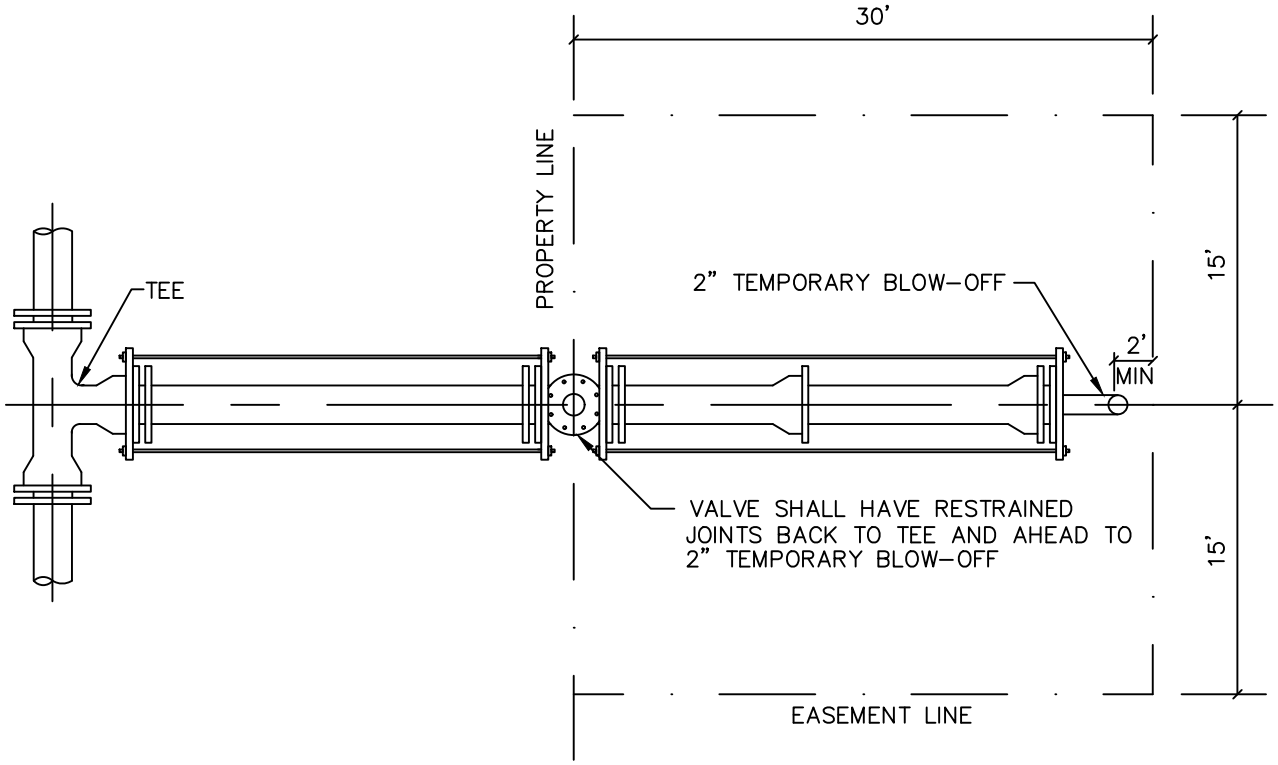
NOTES:

1. ALTERNATE TO THE ABOVE: FASTEN MJ VALVE DIRECTLY TO A MJ ANCHOR TEE (ALSO CALLED SWIVEL TEE)
2. NO HORIZONTAL OR VERTICAL BENDS ARE ALLOWED IN FIRE HYDRANT BRANCH OR SPRINKLER LINES
3. MAXIMUM OF ONE FIRE HYDRANT EXTENSION
4. CONTRACTOR TO TAKE CARE NOT TO BLOCK WEEP HOLES
5. ALL DUCTILE IRON PIPE TO BE POLYETHYLENE WRAPPED

FIRE HYDRANTS, MAINS AND VALVES

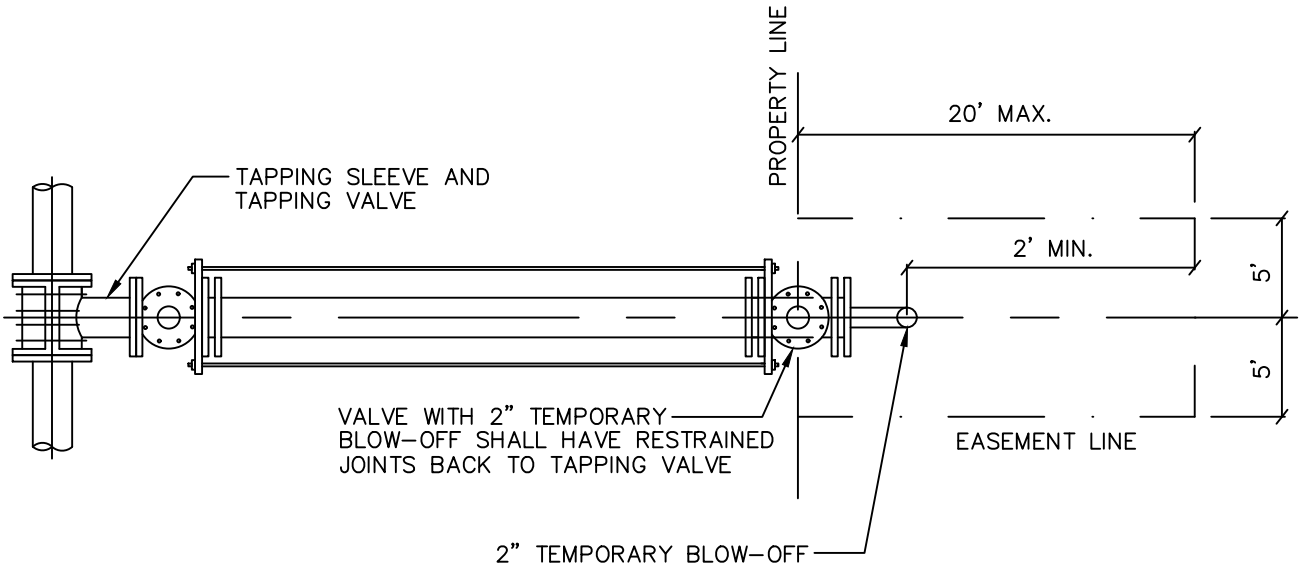
FIRESTONE COLORADO	WATER CONSTRUCTION DRAWINGS	BY: JME SCALE: NTS DATE: 1/2020	DRAWING: W6

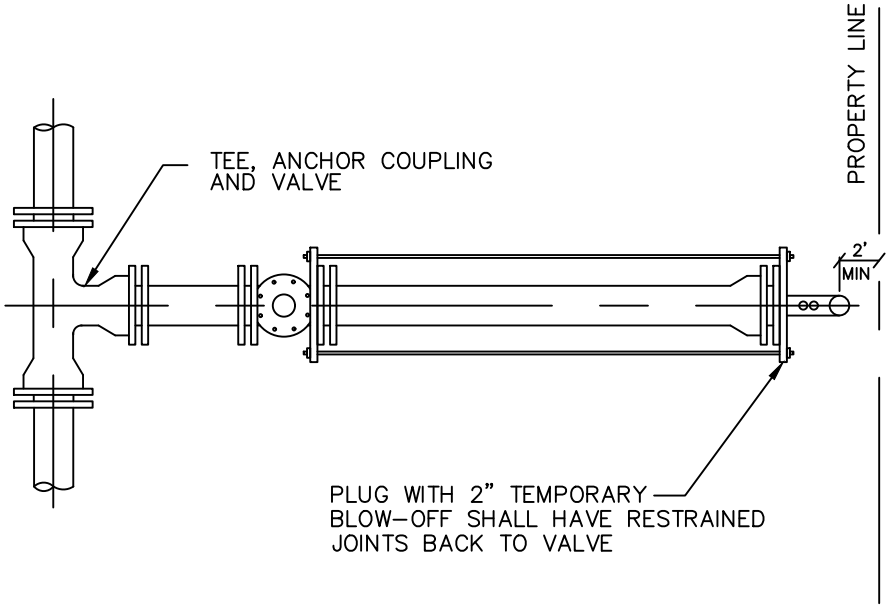




STUB-OUT CONFIGURATIONS (1 OF 2)

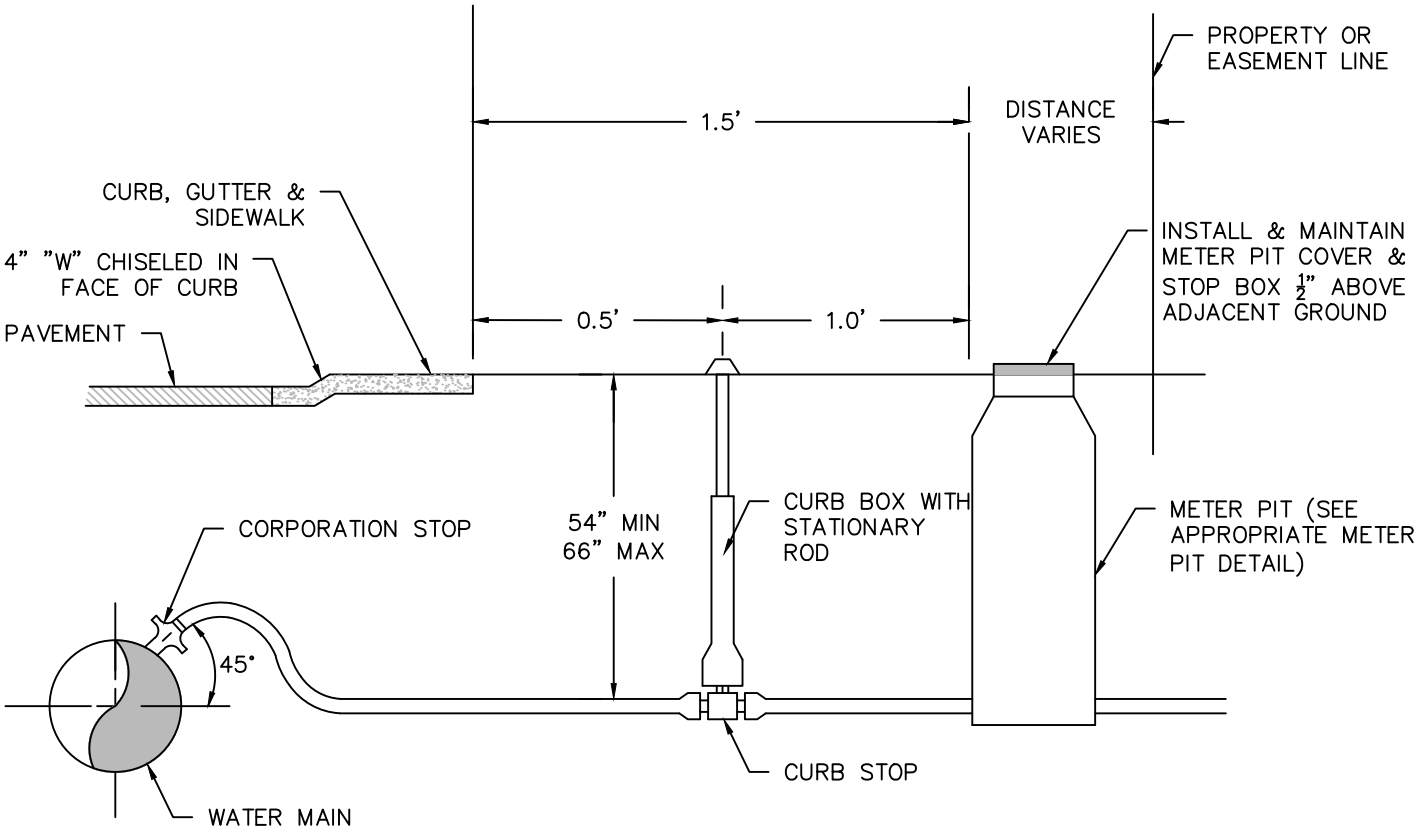
FIRESTONE COLORADO	WATER CONSTRUCTION DRAWINGS	BY: JME SCALE: NTS DATE: 1/2020	DRAWING: W7A





STUB-OUT CONFIGURATIONS (2 OF 2)

FIRESTONE COLORADO	WATER CONSTRUCTION DRAWINGS	BY: JME SCALE: NTS DATE: 1/2020	DRAWING: W7B

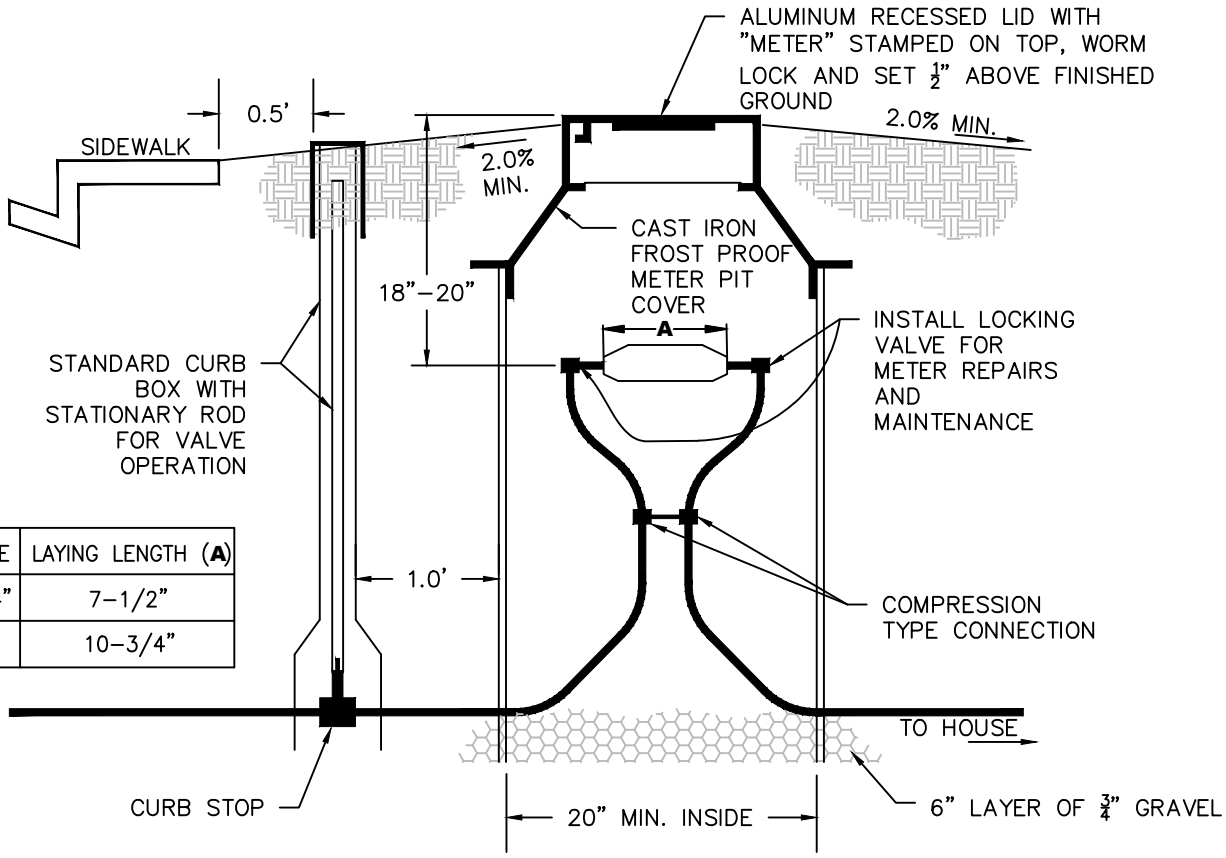


NOTES:

1. FOR 5/8–INCH THROUGH 1–INCH SERVICES, USE SADDLE TAP.
2. FOR 1 1/2–INCH AND 2–INCH SERVICES, INSTALL WITH SADDLE TAP AND CORPORATION STOP AT TIME OF CONSTRUCTION .
3. LOCATION OF CURB BOX AND METER PIT SHALL BE ACCORDING TO APPROVED UTILITY DRAWINGS.
4. TOWN'S RESPONSIBILITY FOR MAINTENANCE SHALL BE THE WATER MAIN, CORPORATION STOP, CURB STOP, SERVICE PIPING UP TO AND INCLUDING THE METER PIT. OWNER'S RESPONSIBILITY SHALL BE FROM THE METER PIT TO THE BUILDING.
5. NO COUPLINGS SHALL BE ALLOWED BETWEEN CURB STOP AND METER SETTER.
6. SERVICE SHALL BE TYPE K COPPER FROM CORPORATION STOP TO 5–FEET PAST METER PIT (MINIMUM).

WATER SERVICE DETAIL

FIRESTONE COLORADO	WATER CONSTRUCTION DRAWINGS	BY: JME SCALE: NTS DATE: 1/2020	DRAWING: W8



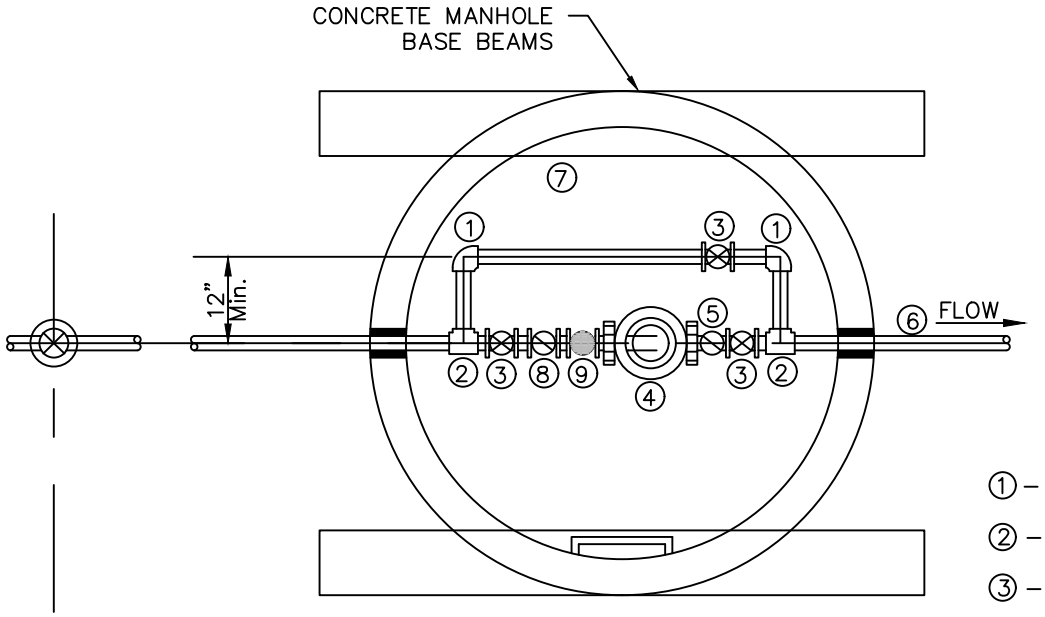
METER SIZE	LAYING LENGTH (A)
5/8"x 3/4"	7–1/2"
1"	10–3/4"

NOTES:

1. METER PIT AND CURB STOP ARE NOT TO BE INSTALLED IN ANY STREET, ALLEY, DRIVEWAY, SIDEWALK, OR PARKING AREA. METER PIT MUST BE INSTALLED IN LANDSCAPED AREA.
2. NO SHRUBS, BOULDERS, RETAINING WALLS, CONCRETE, PAVERS OR OTHER LANDSCAPING FEATURES SHALL BE INSTALLED WITHIN 5' OF THE METER PIT. NO TREES SHALL BE INSTALLED WITHIN 10' OF THE METER PIT. IF LANDSCAPING CHANGES THE GRADE AROUND THE METER PIT THE OWNER SHALL BE REQUIRED TO ADJUST THE METER PIT COVER TO BE 1/2" ABOVE THE FINISHED GRADE AND ENSURE POSITIVE DRAINAGE AWAY FROM THE METER PIT IN ALL DIRECTIONS.
3. THE TOWN SHALL PROVIDE THE METER, SETTER AND PIT. NOTIFY THE PUBLIC WORKS DEPARTMENT ONE WEEK IN ADVANCE OF INSTALLATION SO THAT THE UNITS CAN BE ORDERED IF THERE ARE NONE IN STOCK. THE TOWN SHALL INSTALL THE METER.
4. RESIDENTIAL METER PITS SHOULD BE INSTALLED DURING CONSTRUCTION OF THE HOME TO ENSURE PROPER LOCATION AND PREVENT DAMAGE DURING THE TIME THE INFRASTRUCTURE IS BEING COMPLETED AND THE HOME IS BUILT.
5. METER PITS FOR COMMERCIAL BUILDINGS OR OTHER APPLICATIONS REQUIRING LARGER METERS WILL BE OF A SIMILAR DESIGN. DETAILS FOR LARGER METERS SHALL BE DISCUSSED ON A CASE BY CASE BASIS WITH THE TOWN BEFORE INSTALLATION.
6. EXTENSIONS AND OFF GRADE EXTENSIONS SHALL BE INSERTED BETWEEN THE DOME AND TOP RING TO PUT LID TO GRADE.
7. NO CONNECTIONS OR CHANGES IN PIPE DIAMETER SHALL BE MADE IN THE METER PIT OR IN THE DISTANCE OF FIVE FEET BEYOND THE METER PIT WALL ON THE OUTLET SIDE.
8. LAWN SPRINKLER CONNECTIONS SHALL BE A MINIMUM OF FIVE FEET FROM THE METER PIT WALL ON THE OUTLET SIDE.
9. ANY VARIATION OR DEVIATION FROM THIS STANDARD REQUIRES APPROVAL PRIOR TO INSTALLATION FROM THE TOWN ENGINEER.

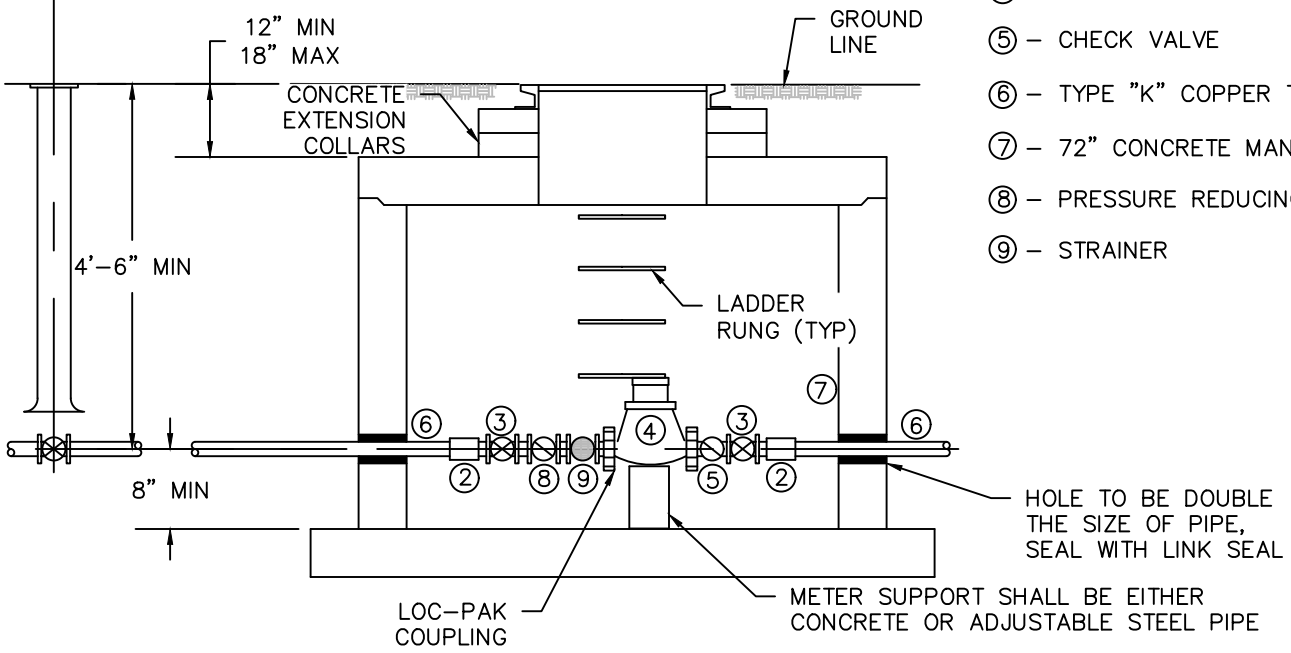
5/8IN - 1IN WATER METER DETAIL

FIRESTONE COLORADO	WATER CONSTRUCTION DRAWINGS	BY: JME SCALE: NTS DATE: 1/2020	DRAWING: W9



PLAN

① – 90° ELBOW WITH SUPPORTS
② – TEE
③ – LOCKABLE BALL VALVE
④ – METER UNIT
⑤ – CHECK VALVE
⑥ – TYPE "K" COPPER TUBING
⑦ – 72" CONCRETE MANHOLE
⑧ – PRESSURE REDUCING VALVE
⑨ – STRAINER



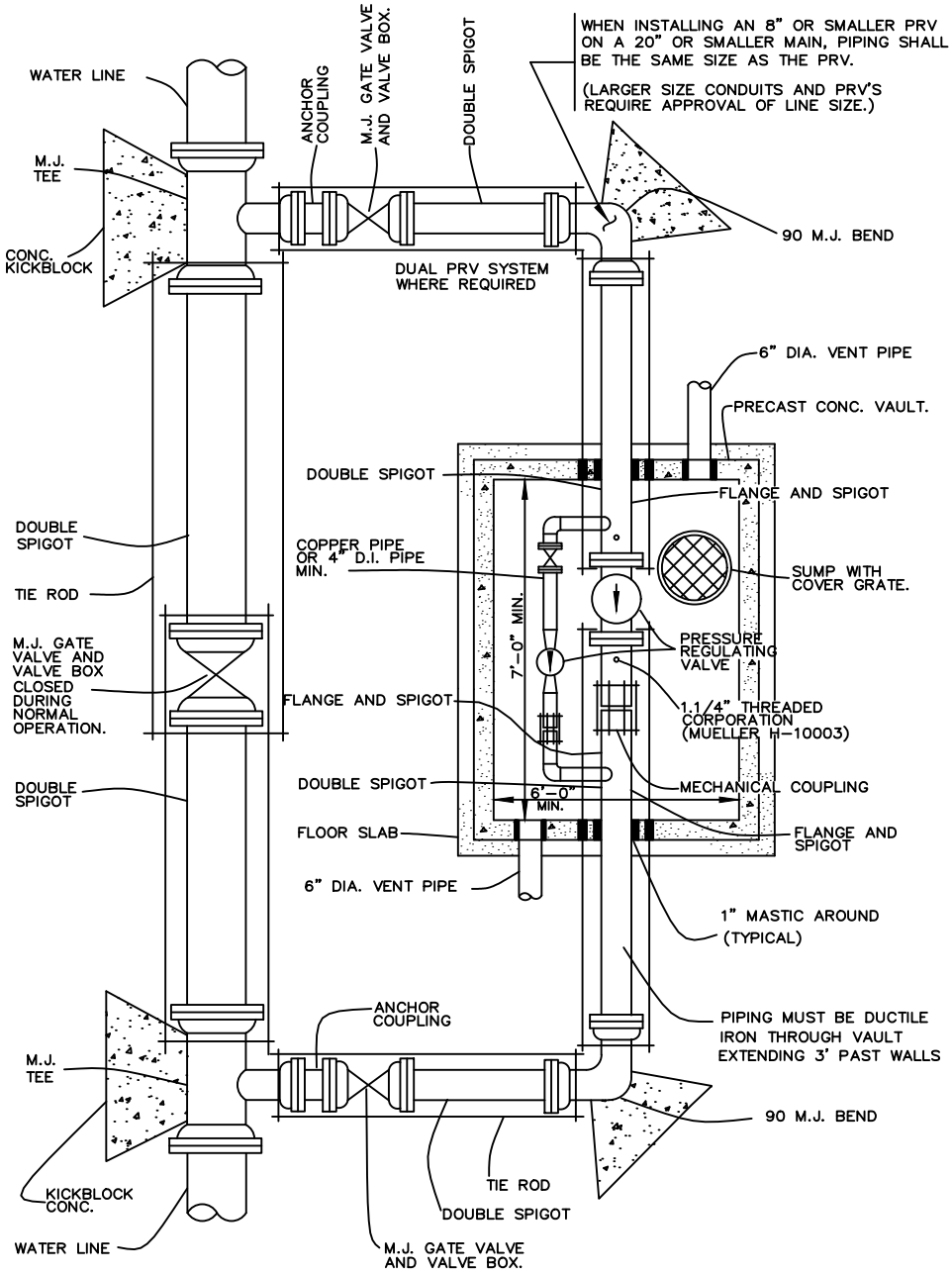
ELEVATION

NOTES:

1. MANHOLE BASE BEAMS REQUIRED FOR DRIVE–WAYS, OR PARKING AREA WHEN APPROVED.
2. A 72" DIAMETER MANHOLE PIT WILL ACCOMMODATE 1–1/2" & 2" METERS W/ CUSTOM SETTER.
3. JOINTS INSIDE METER VAULT SHALL BE EITHER THREADED OR SOLDERED W/ 95–5 TIMANTIMONY SOLDER.
4. NO CONCRETE TO BE LAID IN FLOOR OF METER MANHOLE.
5. METER SHALL BE FLANGED W/ BRASS COMPANION FLANGES.
6. NO CONNECTIONS OR CHANGES IN PIPE DIAMETER SHALL BE MADE IN THE METER PIT OR IN THE DISTANCE OF FIVE FEET BEYOND THE METER PIT ON THE OUTLET SIDE.
7. LADDER RUNGS SHALL BE ON THE OPPOSITE SIDE OF BYPASS.
8. BYPASS SHALL NOT BE INSTALLED FOR USE WITH AN IRRIGATION SYSTEM.
9. CONCRETE OR ADJUSTABLE STEEL PIPE SUPPORTS SHALL BE PROVIDED UNDER THE 90 DEGREE BENDS ON THE BYPASS.

1 1/2 IN - 2 IN WATER METER DETAIL

FIRESTONE COLORADO	WATER CONSTRUCTION DRAWINGS	BY: JME SCALE: NTS DATE: 1/2020	DRAWING: W10

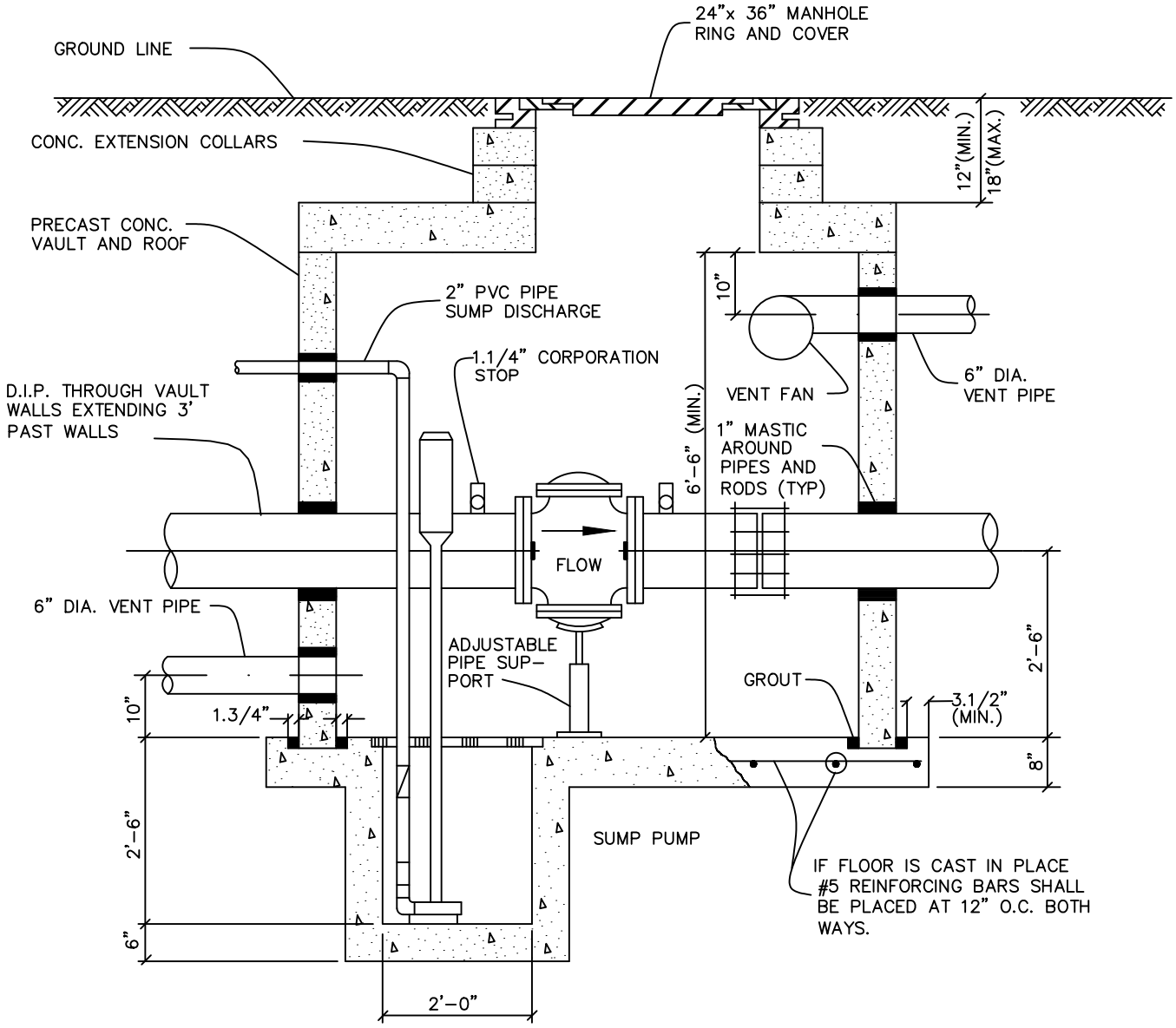


NOTES:

1. A RECTANGULAR VAULT IS REQUIRED. SIZE TO BE DESIGNED TO ACCOMMODATE REQUIRED EQUIPMENT WITH ADEQUATE WORKING SPACE. SHOP DRAWING APPROVAL REQUIRED PRIOR TO CONSTRUCTION.
2. ACCESS STAIRS WITH DOOR OUTSIDE OF PAVEMENT MAY BE REQUIRED ON STREETS WITH HEAVY TRAFFIC.
3. FOR ELEVATION VIEW SEE CROSS SECTION DRAWING ON SHEET 2 OF 2.
4. THREADED FITTINGS ON LOW FLOW.
5. COUPLING ON LOW FLOW.
6. SADDLE FOR TAP FOR LOW FLOW.
7. ALL PIPING 4" IN DIAMETER OR GREATER IS D.I.P.
8. NO PVC PIPING ALLOWED.

PRV IN RECTANGULAR VAULT (1 OF 2)

FIRESTONE COLORADO	WATER CONSTRUCTION DRAWINGS	BY: JME SCALE: NTS DATE: 1/2020	DRAWING: W11A

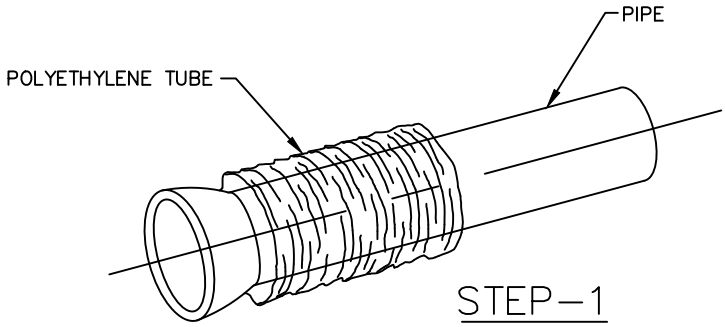


NOTES:

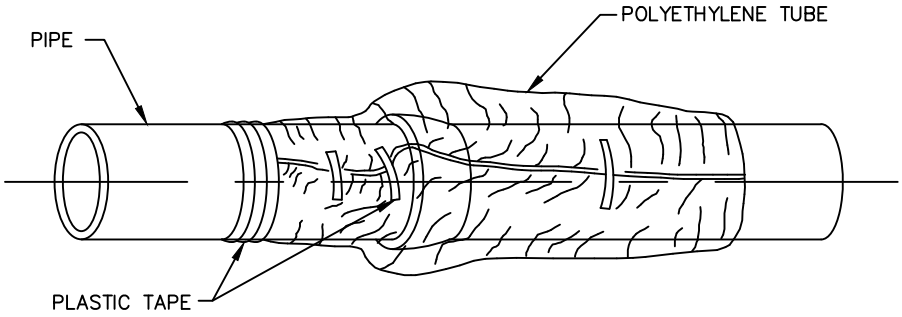
1. A PERMIT IS REQUIRED FOR SUMP PUMP TO DISCHARGE TO STORM SEWER.
2. SUMP PUMP AND VENT FAN REQUIRED IN VAULTS.
3. THIS MANHOLE IS SUITABLE FOR CHECK VALVE INSTALLATIONS.
4. FOR PLAN VIEW AND ADDITIONAL NOTES SEE SHEET 1 OF 2.

PRV IN RECTANGULAR VAULT (2 OF 2)

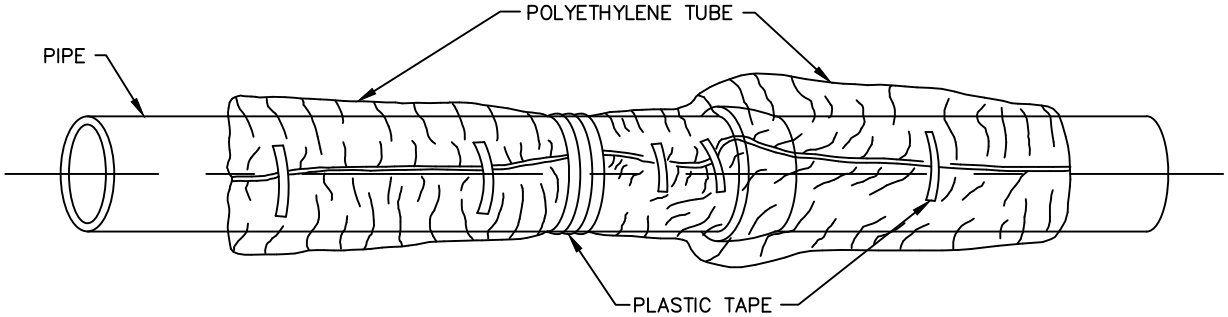
FIRESTONE COLORADO	WATER CONSTRUCTION DRAWINGS	BY: JME SCALE: NTS DATE: 1/2020	DRAWING: W11B



STEP–1



STEP–2



STEP–3

FIELD INSTALLATION–POLYETHYLENE WRAP

STEP–1 PLACE TUBE OF POLYETHYLENE MATERIAL AROUND PIPE PRIOR TO LOWERING PIPE INTO TRENCH.

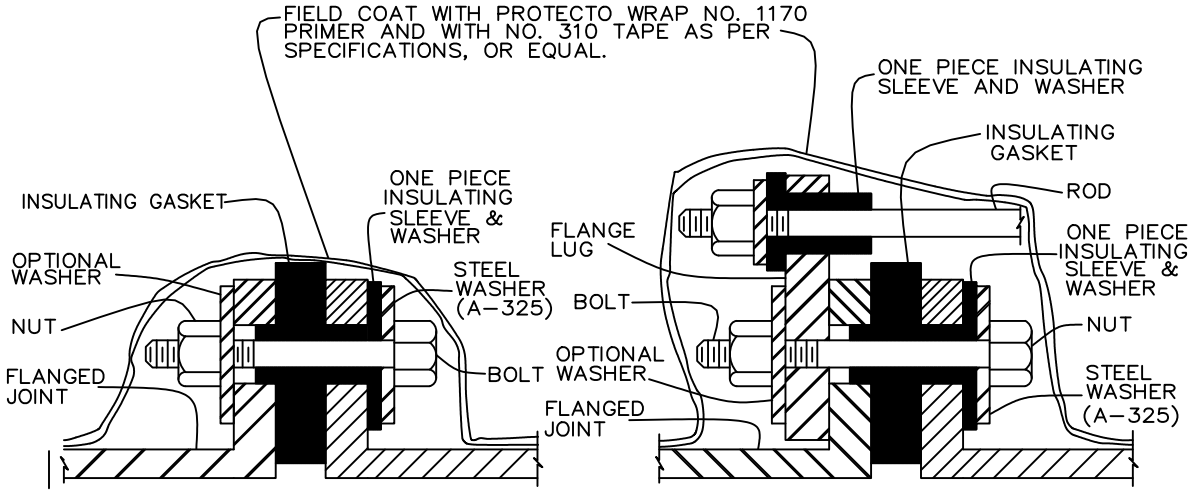
STEP–2 PULL THE TUBE OVER THE LENGTH OF THE PIPE. TAPE TUBE TO PIPE AT JOINT. FOLD MATERIAL AROUND THE ADJACENT SPIGOT END AND WRAP WITH THREE CIRCUMFERENTIAL TURNS OF TWO–INCH WIDE PLASTIC TAPE TO HOLD PLASTIC TUBE AROUND SPIGOT END.

STEP–3 ADJACENT TUBE OVERLAPS FIRST TUBE AND IS SECURED WITH PLASTIC ADHESIVE TAPE. THE POLYETHYLENE TUBE MATERIAL COVERING THE PIPE WILL BE LOOSE. EXCESS MATERIAL AND SHOULD BE NEATLY DRAWN UP AROUND THE PIPE BARREL, FOLDED INTO AN OVERLAP ON TOP OF THE PIPE AND HELD IN PLACE BY MEANS OF PIECES OF THE PLASTIC TAPE AT APPROXIMATELY THREE TO FIVE FOOT INTERVALS.

NOTE: ALL RODDING TO BE ENCASED IN POLYETHYLENE SEPARATED FROM THE PIPE

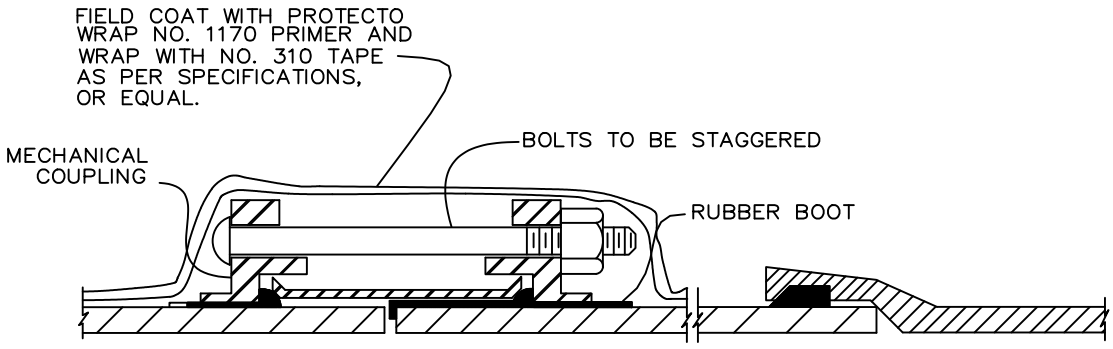
POLYETHYLENE WRAP

FIRESTONE COLORADO	WATER CONSTRUCTION DRAWINGS	BY: JME SCALE: NTS DATE: 1/2020	DRAWING: W12



INSULATED JOINT

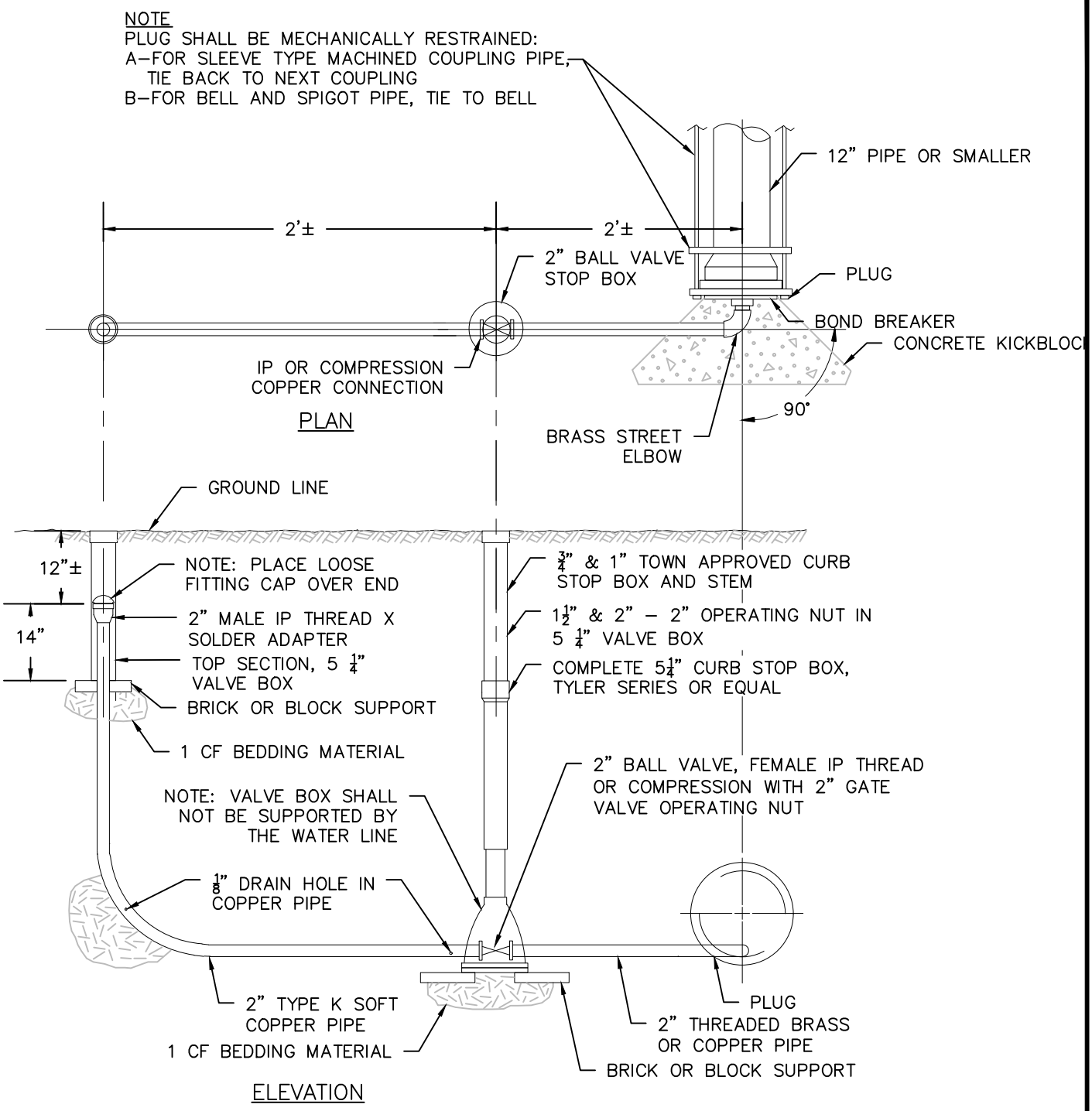
INSULATED ROD



INSULATED MECHANICAL COUPLING

INSULATORS

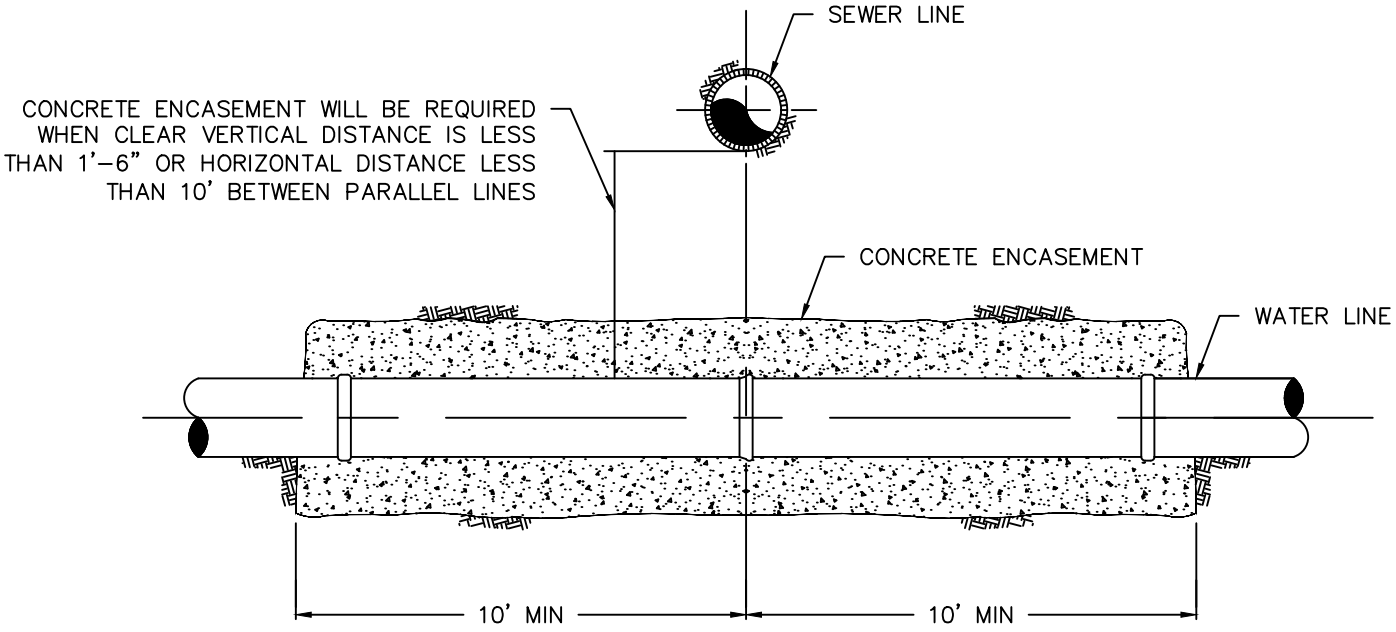
FIRESTONE COLORADO	WATER CONSTRUCTION DRAWINGS	BY: JME SCALE: NTS DATE: 1/2020	DRAWING: W13



NOTE: FOR 12" AND SMALLER PIPE

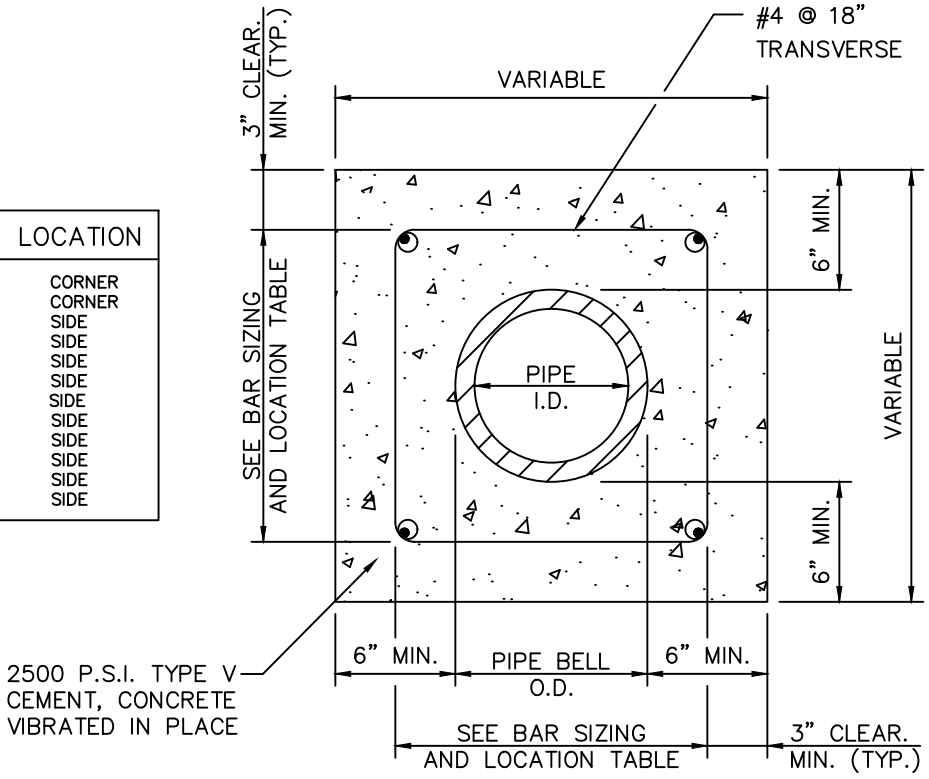
TEMPORARY BLOWOFF FOR 12" AND SMALLER PIPE

FIRESTONE COLORADO	WATER CONSTRUCTION DRAWINGS	BY: JME SCALE: NTS DATE: 1/2020	DRAWING: W14



REINFORCEMENT STEEL

PIPE I.D.	LONGITUDINAL BARS – LOCATION		
6 IN.	4–NO. 4 BARS	1 EACH	CORNER
8 IN.	4–NO. 4 BARS	1 EACH	CORNER
10 IN.	8–NO. 4 BARS	3 EACH	SIDE
12 IN.	8–NO. 4 BARS	3 EACH	SIDE
15 IN.	8–NO. 4 BARS	3 EACH	SIDE
18 IN.	8–NO. 4 BARS	3 EACH	SIDE
21 IN.	12–NO. 4 BARS	4 EACH	SIDE
24 IN.	12–NO. 4 BARS	4 EACH	SIDE
27 IN.	12–NO. 4 BARS	4 EACH	SIDE
30 IN.	12–NO. 4 BARS	4 EACH	SIDE
33 IN.	12–NO. 4 BARS	4 EACH	SIDE
36 IN.	16–NO. 4 BARS	5 EACH	SIDE

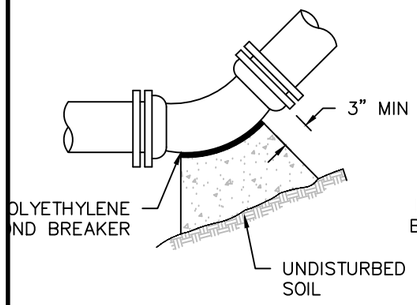


NOTES:

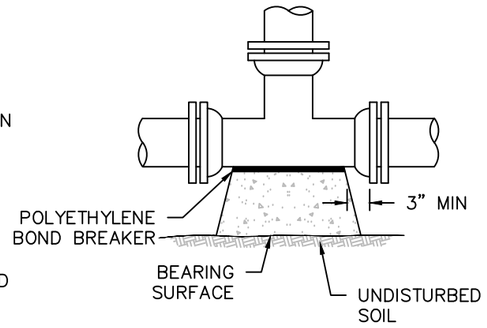
1. CONCRETE ENCASEMENT REQUIRED IN ALL CASES WHERE SEWER LINE IS ABOVE WATER LINE.
2. THE TOWN SHALL REVIEW THIS DETAIL FOR USE ON A CASE BY CASE BASIS. SPECIAL ENCASEMENTS MAY BE REQUIRED AT CREEK CROSSINGS AND CONDUIT CROSSINGS

UTILITY ENCASEMENT DETAIL

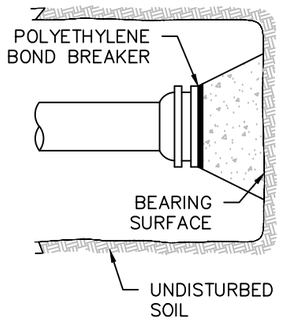
FIRESTONE COLORADO	WATER CONSTRUCTION DRAWINGS	BY: JME SCALE: NTS DATE: 1/2020	DRAWING: W15



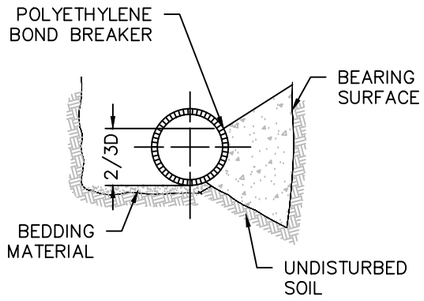
TYPICAL BEND



TEE

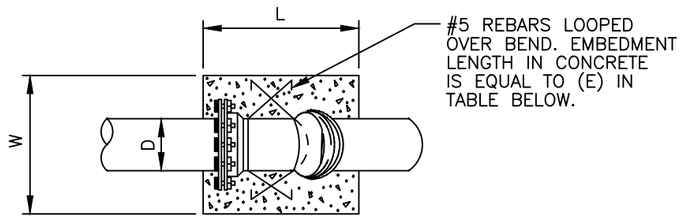


DEAD END

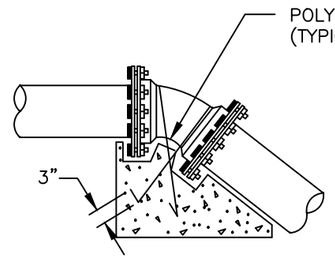


TYPICAL CROSS SECTION

BEARING AREA (SQUARE FEET) FOR CONCRETE THRUST BLOCKS								
SIZE	BENDS				TEES	DEAD ENDS	CROSS W/ 1 BRANCH PLUGGED	CROSS W/ 2 BRANCHES PLUGGED
	90°	45°	22-1/2°	11-1/4°				
3	1.5	0.8	0.4	0.2	1.1	1.1	1.1	1.1
4	2.7	1.4	0.7	0.4	1.9	1.9	1.9	1.9
6	6.0	3.2	1.7	0.8	4.2	4.2	4.2	4.2
8	10.7	5.8	2.9	1.5	7.5	7.5	7.5	7.5
10	16.7	9.0	4.6	2.3	11.8	11.8	11.8	11.8
12	24.0	13.0	6.6	3.3	17.0	17.0	17.0	17.0
14	32.7	17.7	9.0	4.5	23.1	23.1	23.1	23.1
15	37.5	20.3	10.3	5.2	26.5	26.5	26.5	26.5
16	42.7	23.1	11.8	5.9	30.2	30.2	30.2	30.2
18	54.0	29.2	14.9	7.5	38.2	38.2	38.2	38.2
20	66.6	36.1	18.4	9.2	47.1	47.1	47.1	47.1
21	73.5	39.8	20.3	10.2	52.0	52.0	52.0	52.0
22	80.6	43.6	22.2	11.2	57.0	57.0	57.0	57.0
24	96.0	51.9	26.5	13.3	67.9	67.9	67.9	67.9
30	149.9	81.2	41.4	20.8	106.0	106.0	106.0	106.0
36	215.9	116.9	59.6	29.9	152.7	152.7	152.7	152.7



PLAN



REBARS EXPOSED TO EARTH SHALL BE COATED WITH BITUMINOUS PAINT.

PROFILE

SIZE OF PIPE (D)	11 1/4 DEG.					22 1/2 DEG.					45 DEG.				
	L"	W"	H"	E"	VOL	L"	W"	H"	E"	VOL	L"	W"	H"	E"	VOL
4"	12	24	24	12	4	12	34	34	12	8	22	37	32	22	15
6"	18	32	27	18	9	15	52	40	15	18	28	64	32	28	33
8"	21	40	33	21	16	22	61	40	22	31	35	64	45	35	58
10"	24	50	36	24	25	30	59	48	30	49	42	72	52	42	90
12"	31	56	36	31	36	36	70	48	36	70	45	80	62	45	129

NOTES:

1. REFER TO CONCRETE THRUST BLOCK TABLE FOR MINIMUM BEARING SURFACE AREAS.
2. ALL FITTINGS TO BE WRAPPED WITH POLYETHYLENE.
3. PIPE INSTALLED UNDER CONDITIONS DIFFERENT FROM THOSE NORMALLY ENCOUNTERED SHALL REQUIRE THRUST BLOCKS DESIGNED FOR THOSE PARTICULAR CONDITIONS.
4. THRUST BLOCKS ON PIPE LARGER THAN 12" SHALL BE DESIGNED FOR CONDITIONS EXISTING AT THE INSTALLATION SITE.
5. REFER TO SECTION 03300 FOR CONCRETE REQUIREMENTS.
6. CALCULATION MADE FOR THIS TABLE ASSUME:
   100 P.S.I. INTERNAL STATIC PRESSURE
   1,000 P.S.F. SOIL BEARING CAPACITY
   1.5 FACTOR OF SAFETY
7. FOR STATIC PRESSURES GREATER THAN 100 P.S.I. AND/OR SOIL BEARING CAPACITY LESS THAN 1,000 P.S.F., THE DESIGN ENGINEER SHALL PROVIDE SPECIFIC CALCULATIONS FOR REVIEW AND APPROVAL.
8. ALL CONCRETE SHALL BE 4000 P.S.I. MINIMUM.

VERTICAL THRUST BLOCK NOTES:

1. THRUST BLOCKING SHALL BE CAST AGAINST UNDISTURBED EARTH. FORMS SHALL BE USED AS REQUIRED TO OBTAIN ADEQUATE BEARING AND TO CONFINE THE CONCRETE. THRUST BLOCKING SHALL BEAR ON THE FITTING OR END CAP ONLY AND SHOULD NOT BE ALLOWED TO SPILL OVER THE JOINT OR AGAINST THE PIPE.
2. VOLUME IS IN CUBIC FEET.
3. ALL CONCRETE TO BE 4000 P.S.I. MIN.
4. BLOCKS TO BE CENTERED HORIZONTALLY ON THE BEND.
5. DESIGN BASED ON A TEST PRESSURE OF 150 P.S.I. AND SAFETY FACTOR (S_f) OF 1.5
6. $V_g = \frac{S_f \ PA \ SIN \ \Theta}{W_m}$
7. $W_m = 140 \ \# \ / \ FT^3$
8. THE DESIGN ENGINEER IS RESPONSIBLE FOR VERIFYING THE ACTUAL SITE CONDITIONS WITH RESPECT TO THE ASSUMPTIONS LISTED ABOVE.

CONCRETE THRUST BLOCK DETAIL

FIRESTONE COLORADO

WATER CONSTRUCTION DRAWINGS

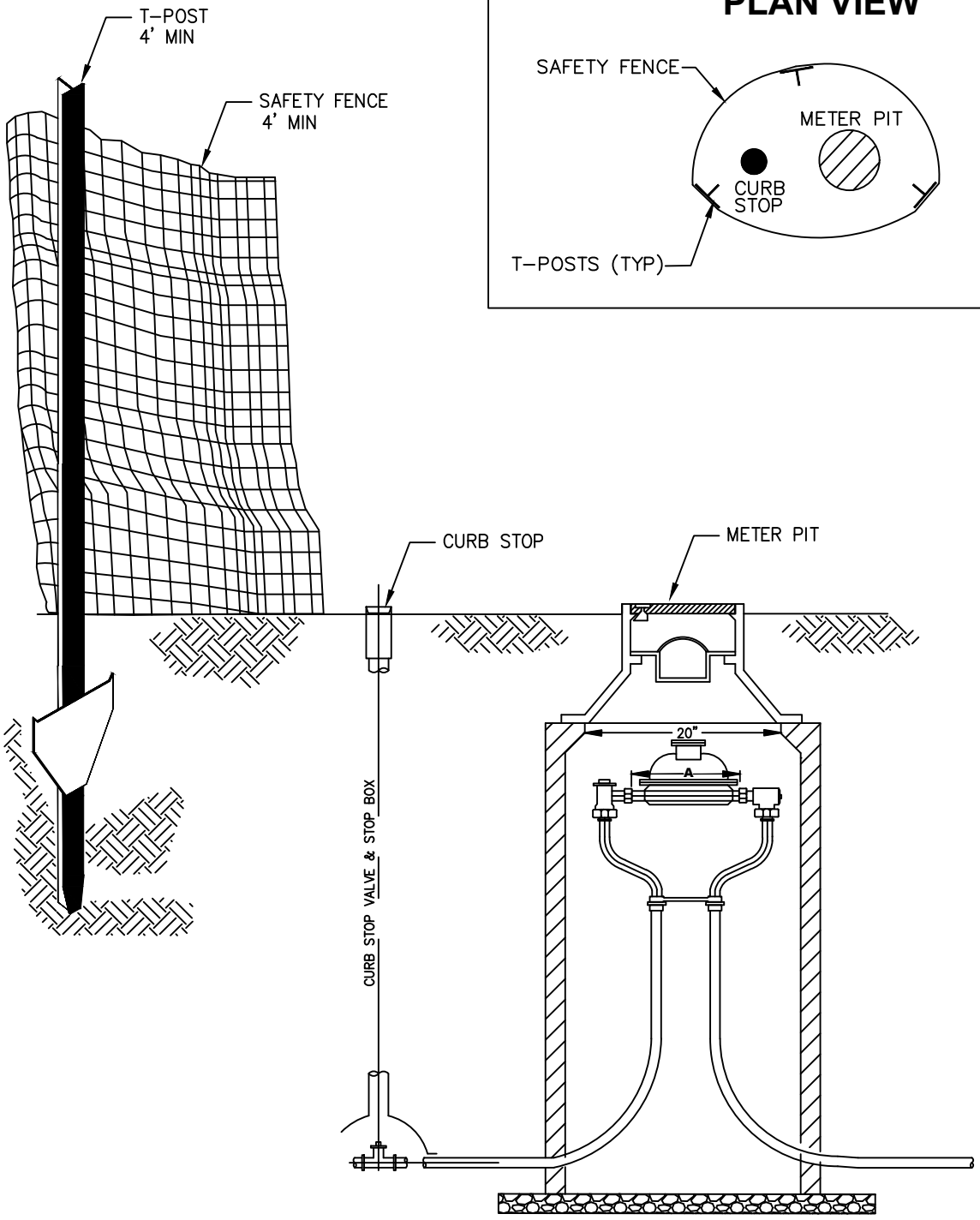
BY: JME

SCALE: NTS

DATE: 1/2020

DRAWING: W16

PLAN VIEW

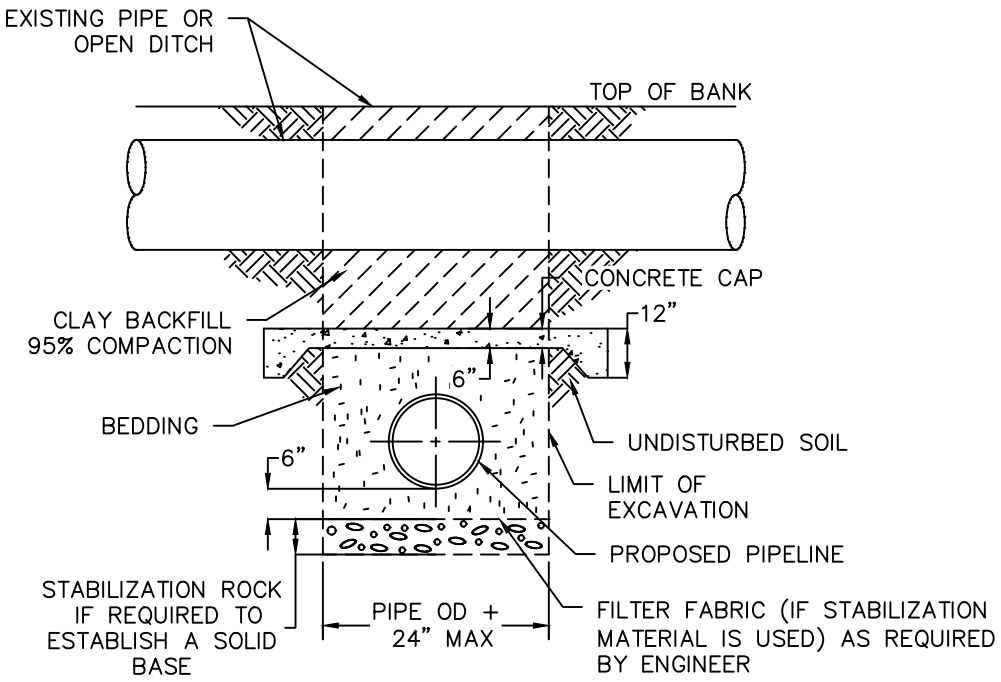


NOTE:

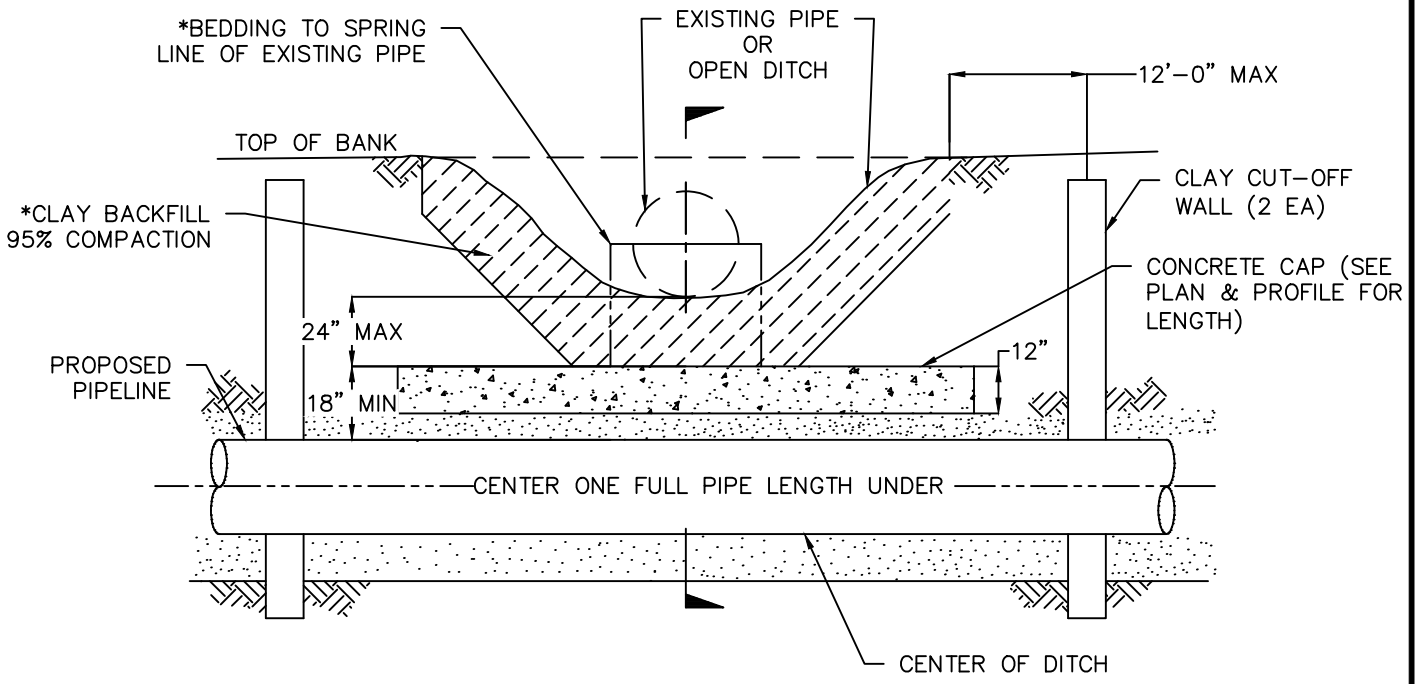
ALL METER PITS AND CURB STOPS SHALL BE PROTECTED AT THE TIME OF INSTALLATION WITH A MINIMUM OF 3-T POSTS AND ORANGE SAFETY FENCE. THE T-POSTS AND SAFETY FENCE SHALL REMAIN IN PLACE AND IN GOOD CONDITION UNTIL THE LANDSCAPING IS INSTALLED.

METER PIT AND CURB STOP PROTECTION

FIRESTONE COLORADO	WATER CONSTRUCTION DRAWINGS	BY: JME SCALE: NTS DATE: 1/2020	DRAWING: W17



SECTION

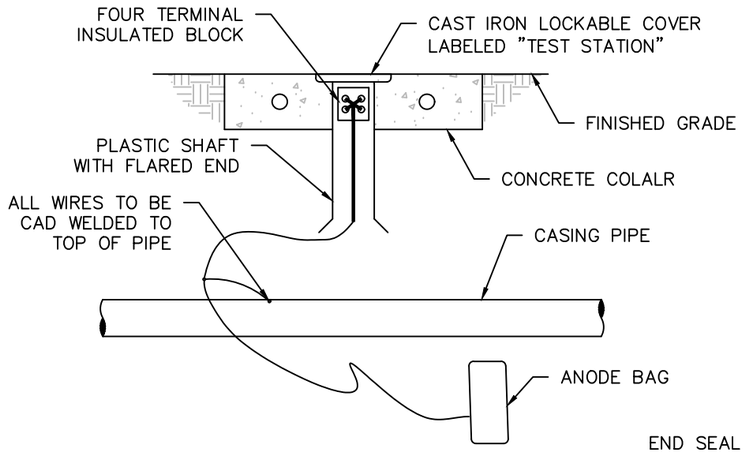


PROFILE

*USE CLAY BACKFILL ONLY WHEN CROSSING OPEN DITCH. USE BEDDING MATERIAL TO SPRING LINE OF EXISTING PIPE WHEN CROSSING PIPE.

DITCH OR PIPE CROSSING DETAIL

FIRESTONE COLORADO	WATER CONSTRUCTION DRAWINGS	BY: JME SCALE: NTS DATE: 1/2020	DRAWING: W18

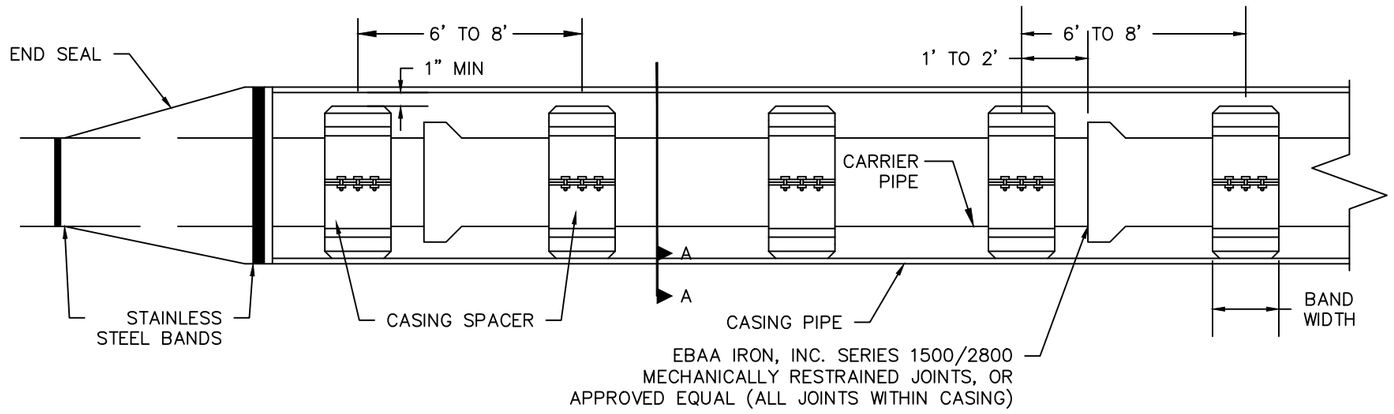


CATHODIC TEST STATION DETAIL

CATHODIC PROTECTION NOTES:

1. INSTALL THE ANODES VERTICALLY OR HORIZONTALLY IN SOIL WITH TOP OF ANODES BELOW THE SPRINGLINE OF THE PIPE. ANODES MUST BE PLACED IN NATIVE SOIL, NOT SELECT BACKFILL SUCH AS SAND, BEDDING, OR CRUSHED ROCK.
2. INSTALL A 17 LB HIGH POTENTIAL MAGNESIUM ANODE BAG ON EACH END OF STEEL CASING PIPES WITH A CATHODIC TEST STATION.
3. STATION TEST WIRES TO BE THHN/THWH.
4. INSTALL A MINIMUM OF 2 FT SLACK AT EACH END OF WIRES.
5. BE CAUTIOUS DURING BACKFILLING. DO NOT DAMAGE OR STRESS WIRES OR CONNECTIONS.

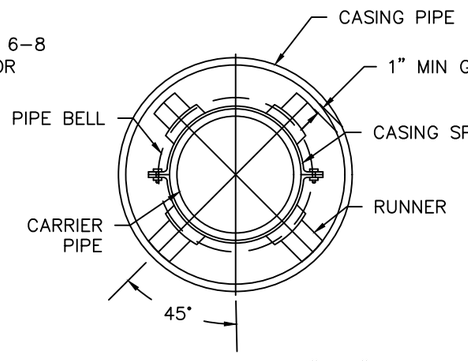
CARRIER PIPE DIAMETER (in)	MINIMUM CASING PIPE INSIDE DIAMETER (in)	BORINGS AND ENCASEMENTS: STEEL CASING PIPE MIN WALL THICKNESS (in)	CASING SPACERS (Y or N)
8"	21"	0.375	Y
10"	23"	0.375	Y
12"	26"	0.500	Y
14"	30"	0.500	Y



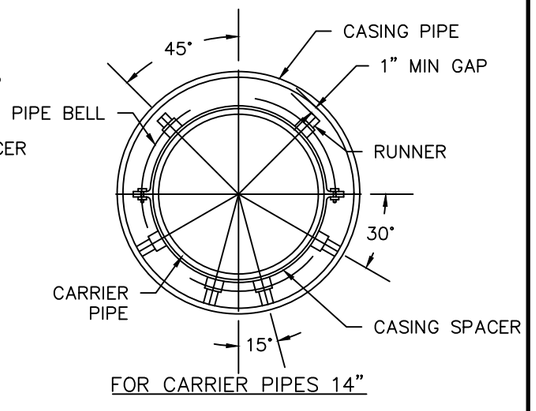
NOTES:

1. CASING PIPE, CASING SPACERS, AND END SEALS TO BE INSTALLED PER WATER CONSTRUCTION SPECIFICATIONS.
2. RECOMMENDED CASING SPACER POSITIONING – PLACE ONE CASING SPACER 1–2 FT ON EITHER SIDE OF THE BELL JOINT AND ONE EVERY 6–8 FT APART THERE AFTER FOR A TOTAL OF 3 CASING SPACERS PER PIPE LENGTH UNLESS OTHERWISE SPECIFIED BY THE MANUFACTURER OR TOWN.
3. FOR 12" DIAMETER AND SMALLER CARRIER PIPES USE 8" CASING SPACER BANDWIDTH.
4. FOR CARRIER PIPES LARGER THAN 12' DIAMETER USE 12" CASING SPACER BANDWIDTH.
5. CASING SPACERS TO BE IN THE "CENTER RESTRAINED" POSITION.
6. ALL BORINGS & ENCASEMENTS WILL REQUIRE END SEALS AS SHOWN.
7. TRACER WIRE SHALL BE EXTENDED THROUGH THE CASING PIPE.

ELEVATION VIEW



FOR CARRIER PIPES 8"–12"



FOR CARRIER PIPES 14"

SECTION A–A

CASING PIPE DETAIL

FIRESTONE COLORADO

WATER CONSTRUCTION DRAWINGS

BY: JME

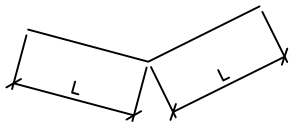
SCALE: NTS

DATE: 1/2020

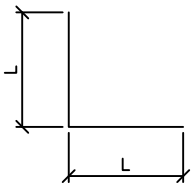
DRAWING: W19

ROD DIAMETER, GRADE & LENGTH OF RESTRAINED PIPE

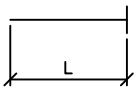
PIPE SIZE	4"			6"			8"			12"			16"			20"			24"		
FITTING	D	L	G	D	L	G	D	L	G	D	L	G	D	L	G	D	L	G	D	L	G
90° BEND, TEE, PLUG	3/4"	30'	MS	3/4"	45'	MS	3/4"	60'	MS	3/4"	86'	MS	1"	108'	HS	1 1/4"	132'	HS	–	155'	–
VALVE	–	–	–	–	–	–	–	–	–	–	–	–	1"	108'	HS	1 1/4"	132'	HS	–	155'	–
45° BEND	3/4"	9'	MS	3/4"	13'	MS	3/4"	18'	MS	3/4"	25'	MS	1"	32'	MS	3/4"	39'	HS	–	45'	–
22 1/2° BEND	3/4"	1'	MS	3/4"	4'	MS	3/4"	5'	MS	3/4"	7'	MS	3/4"	8'	MS	3/4"	10'	MS	–	12'	–
11 1/4° BEND	–	–	–	–	–	–	3/4"	1'	MS	3/4"	2'	MS	3/4"	2'	MS	3/4"	3'	MS	–	3'	–



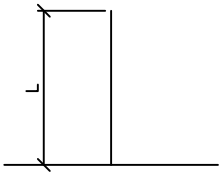
HORIZONTAL BENDS



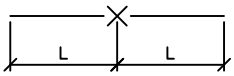
90° HORIZONTAL BEND



PLUG



TEE



VALVE

NOTES:

1. LENGTH OF RESTRAINED PIPE MEASURED EACH WAY FROM VALVES AND BENDS.
2. CLAMPS AND RODS NOT ALLOWED FOR 24" & LARGER PIPES.
3. D=DIAMETER, L=LENGTH, G=GRADE, MS=MILD STEEL, HS=HIGH STRENGTH.
4. MIN 4.5' GROUND COVER REQD.
5. BASED ON 150 PSI INTERNAL PRESSURE.
6. MS = MILD STEEL ROD ASTM A 36.
7. HS = HIGH STRENGTH ROD ASTM A 193 GRADE B7.
8. NUTS SHALL BE ASTM A 307 GRADE A OR B HEXAGON HEAVY SERIES. HS NUTS SHALL CONFORM TO MS-22.
9. LENGTH REFERS TO THE AMOUNT OF PIPE WHICH MUST BE RESTRAINED TOGETHER.
10. LENGTH OF RESTRAINED PIPE CHART IS ALSO FOR THE LENGTH OF JOINT RESTRAINT FOR MEGALUGS.
11. TEES & CROSSES MUST BE RESTRAINED IN ALL APPLICABLE DIRECTIONS.
12. 12" AND SMALLER IN LINE VALVES AND TEES SHALL HAVE A MECHANICAL JOINT RESTRAINT DEVICE ON EACH SIDE OF THE FITTING OR VALVE.
13. A SECOND VALVE WILL BE REQD TO BE CLOSED WHEN EXCAVATING NEXT TO A EXIST VALVE.
14. WHEN REDUCERS ARE USED ON VALVE INSTALLATIONS THE LENGTH OF RESTRAINT SHALL BE BASED ON THE SIZE OF THE PIPE NOT THE SIZE OF THE VALVE.
15. ALL REDUCERS/INCREASERS SHALL HAVE MECHANICAL RESTRAINT DEVICES ON EACH SIDE OF FITTING.
16. PIPE JOINT RESTRAINT MAY BE ACCOMPLISHED USING HARNESS RODS, MECHANICAL JOINT RESTRAINT OR RESTRAINED JOINT PIPE AND FITTINGS.
17. AN ANALYSIS OF THE NECESSARY RESTRAINT LENGTH FOR PIPE LARGER THAN 24" SHALL BE SUBMITTED TO THE TOWN ENGINEER FOR REVIEW AND APPROVAL ON A CASE BY CASE BASIS.

RESTRAINED PIPE LENGTHS

FIRESTONE COLORADO

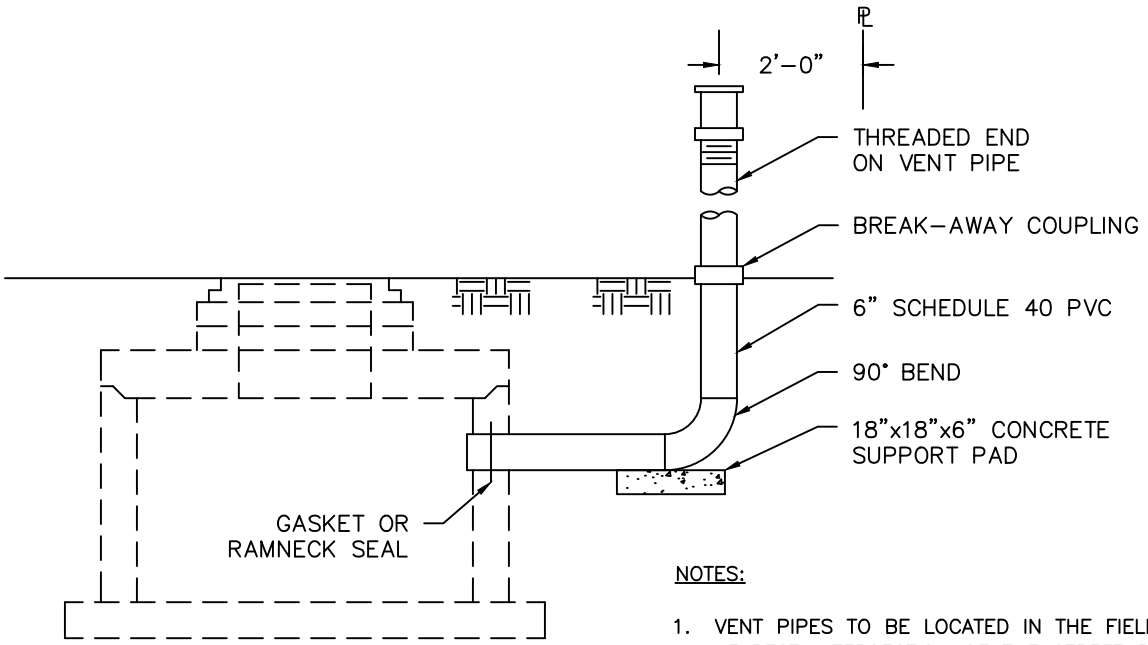
WATER CONSTRUCTION DRAWINGS

BY: JME

SCALE: NTS

DATE: 1/2020

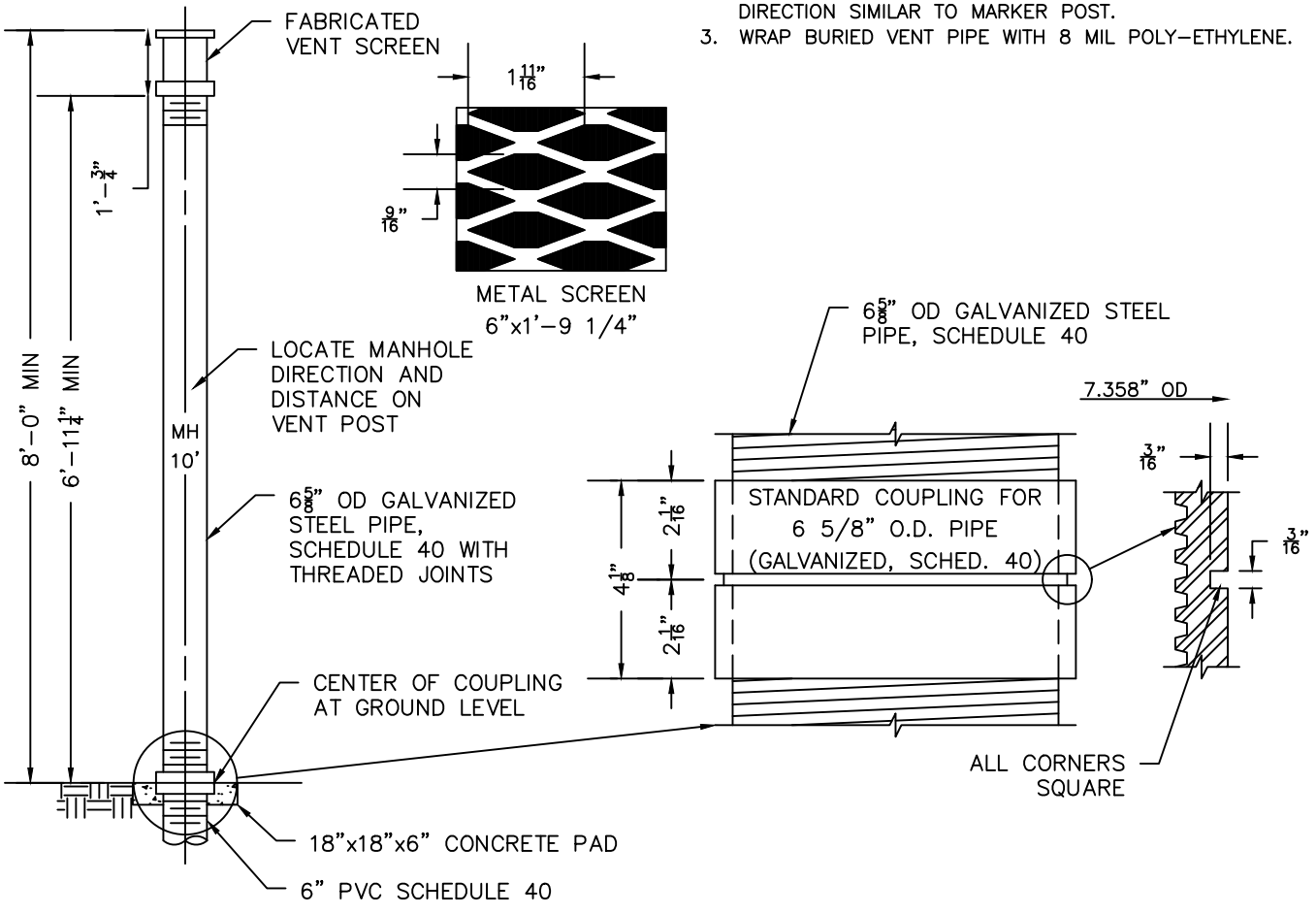
DRAWING: W20



VENT PIPE INSTALLATION

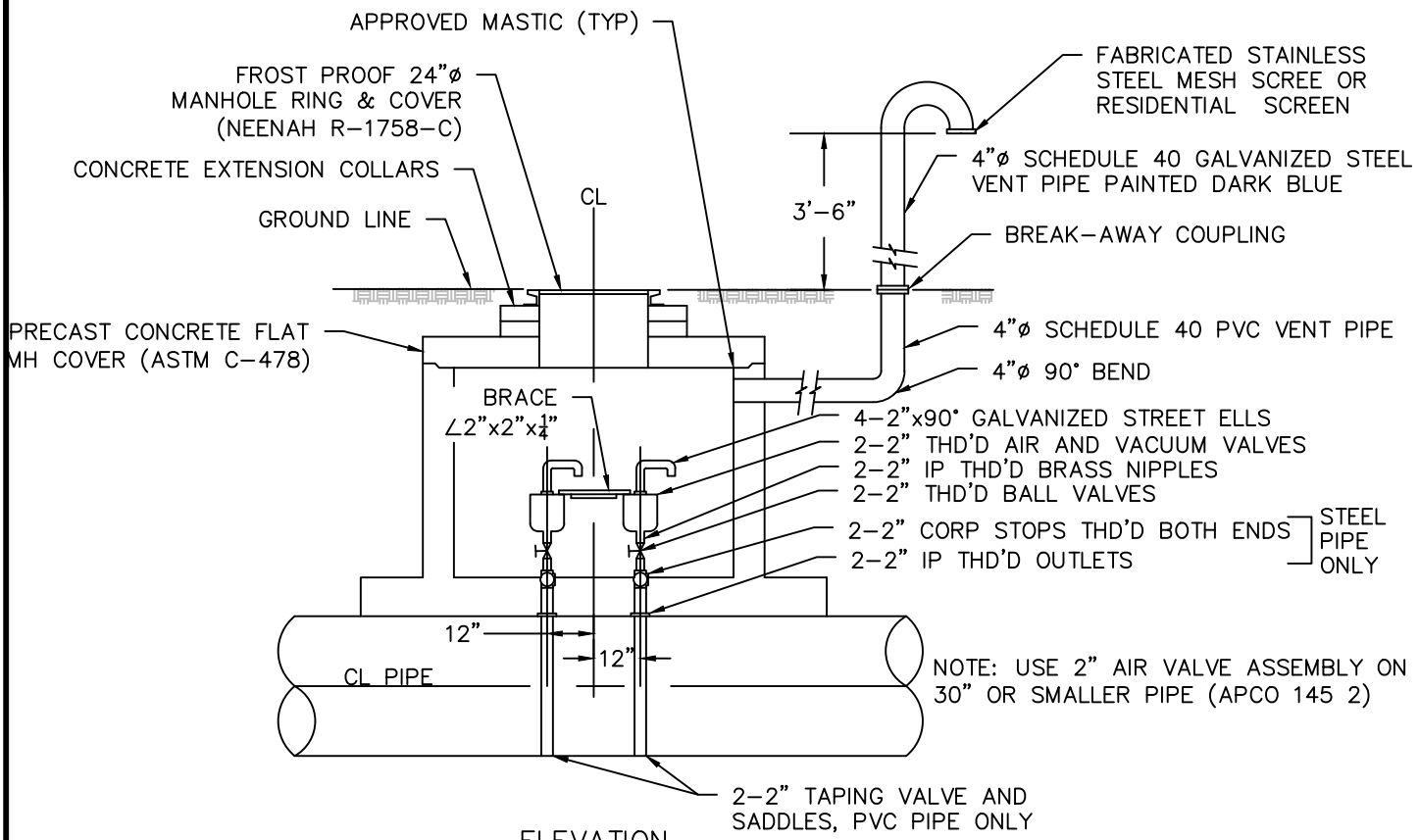
NOTES:

1. VENT PIPES TO BE LOCATED IN THE FIELD AT THE NEAREST INTERSECTION OF THE STREET PROPERTY LINE AND SIDE LOT LINE.
2. PAINT PIPE AND LOCATE M.H. WITH DISTANCE AND DIRECTION SIMILAR TO MARKER POST.
3. WRAP BURIED VENT PIPE WITH 8 MIL POLY-ETHYLENE.

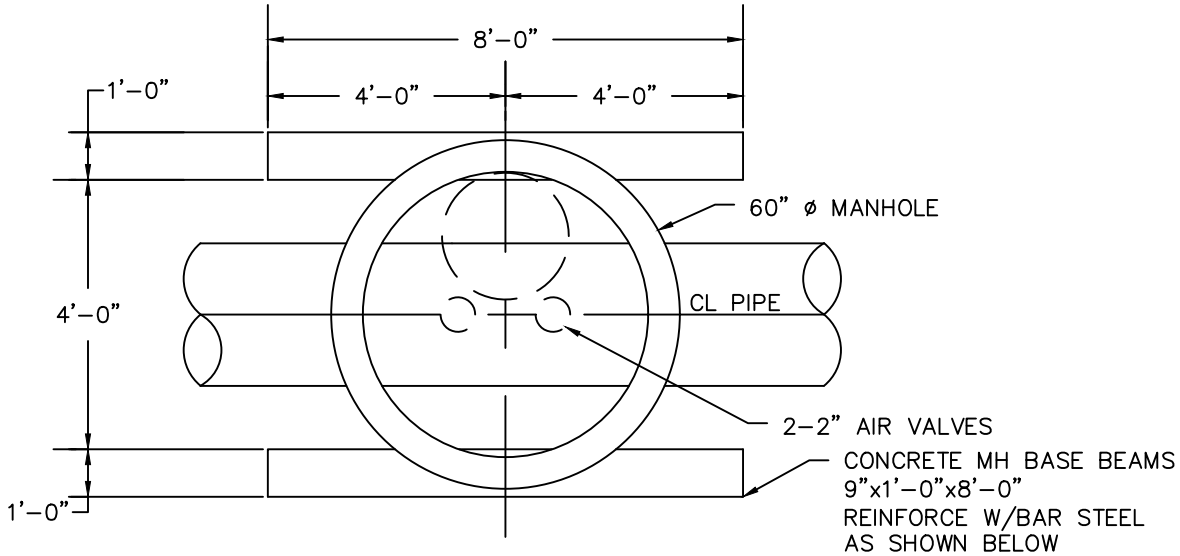


GALVANIZED STEEL VENT PIPE

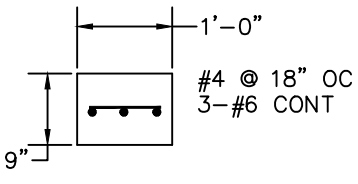
FIRESTONE COLORADO	WATER CONSTRUCTION DRAWINGS	BY: JME SCALE: NTS DATE: 1/2020	DRAWING: W21



ELEVATION



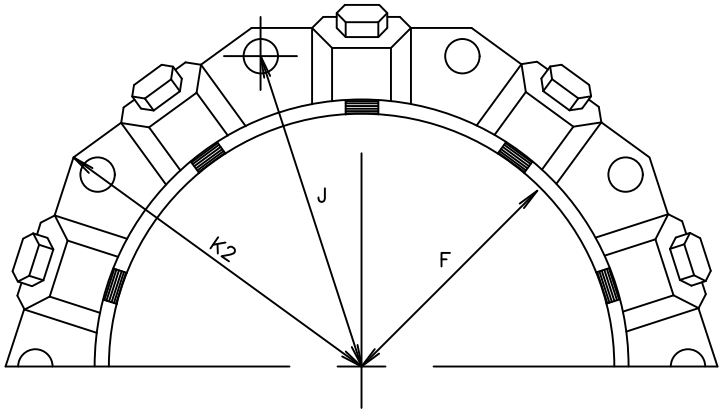
PLAN



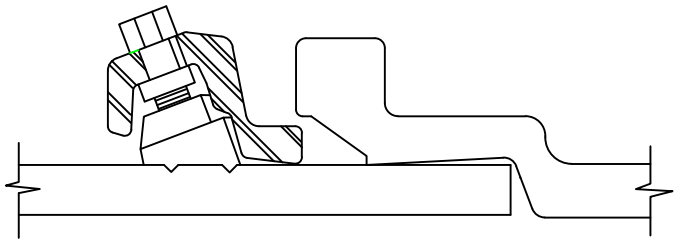
FOOTING DETAIL

AIR AND VACUUM VALVE DETAIL

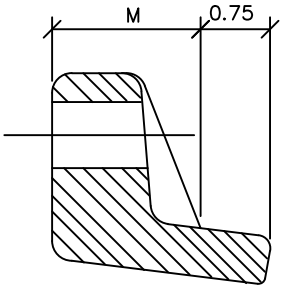
FIRESTONE COLORADO	WATER CONSTRUCTION DRAWINGS	BY: JME SCALE: NTS DATE: 1/2020	DRAWING: W22



MECHANICAL JOINT RESTRAINT



WEDGE DETAIL



BOLT HOLE DETAIL

DIMENSIONS

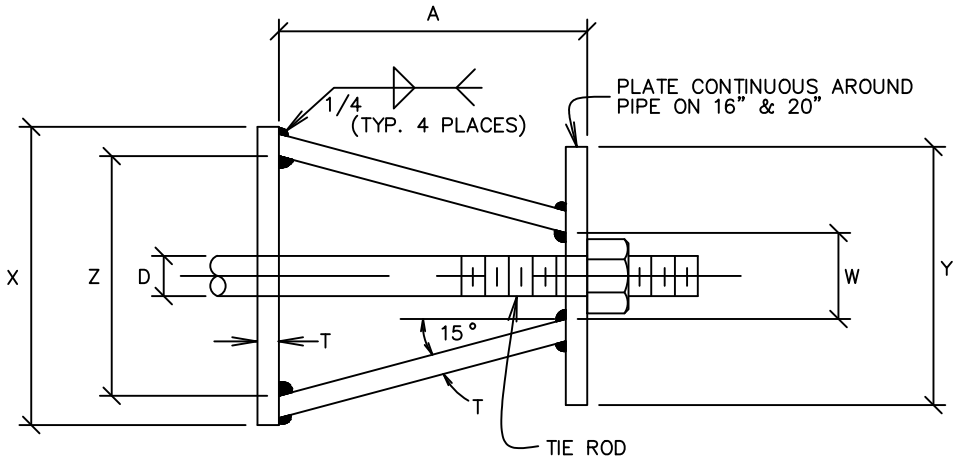
	NOMINAL PIPE SIZE	NO. OF BOLTS	NO. OF WEDGES	K2 INCHES	J INCHES	F INCHES	M INCHES	
PVC	4"	2	2					
	6"	6	3	11.12	9.50	7.00	0.88	PVC
	8"	6	4	13.37	11.75	9.15	1.00	
	10"	8	6	15.62	14.00	11.20	1.00	
	12"	8	8	17.88	16.25	13.30	1.25	
DI	4"	4	2					
	6"	6	3	11.12	9.50	7.00	0.88	DI
	8"	6	4	13.37	11.75	9.15	1.00	
	10"	8	6	15.62	14.00	11.20	1.00	
	12"	8	8	17.88	16.25	13.30	1.25	

NOTES:

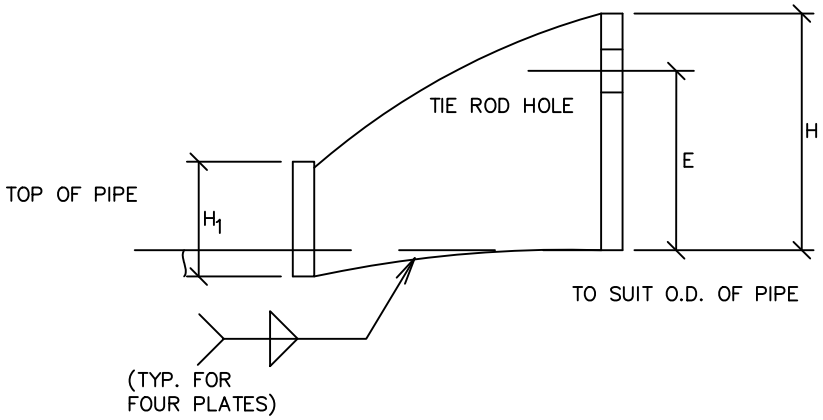
1. DIMENSIONS FOR 16" AND 20" D.I. PIPE NOT SHOWN.
2. OTHER MECHANICAL JOINT RESTRAINT DEVICES MUST BE APPROVED BEFORE INSTALLATION.

MECHANICAL JOINT RESTRAINT DETAIL

FIRESTONE COLORADO	WATER CONSTRUCTION DRAWINGS	BY: JME SCALE: NTS DATE: 1/2020	DRAWING: W23



TOP VIEW



SIDE VIEW

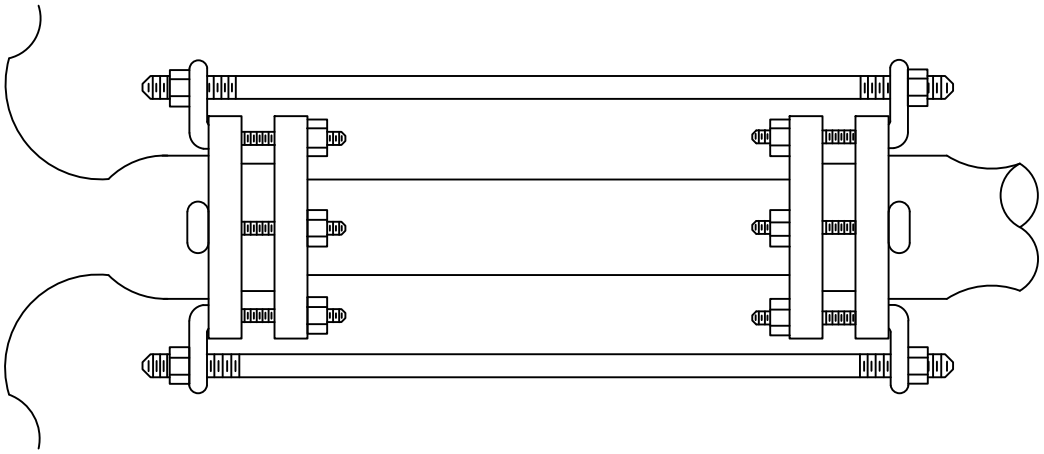
	CARRIER PIPE NOMINAL DIA.	STUD DIA. D	A	W	Z	T	H	E	H_1	Y	X
W/O FLANGED LUGS	4" TO 12"	3/4"	5"	1-1/2"	3-3/4"	3/8"	4-1/8"	3-1/8"	2"	4-1/2"	5"
	16"	1"	5-3/4"	1-3/4"	4-1/2"	1/2"	4-1/2"	3-1/4"	2"	RING	6"
	20"	1-1/4"	7-1/2"	2"	5-3/4"	5/8"	5"	3-3/4"	2-1/2"	RING	7-1/2"

NOTES:

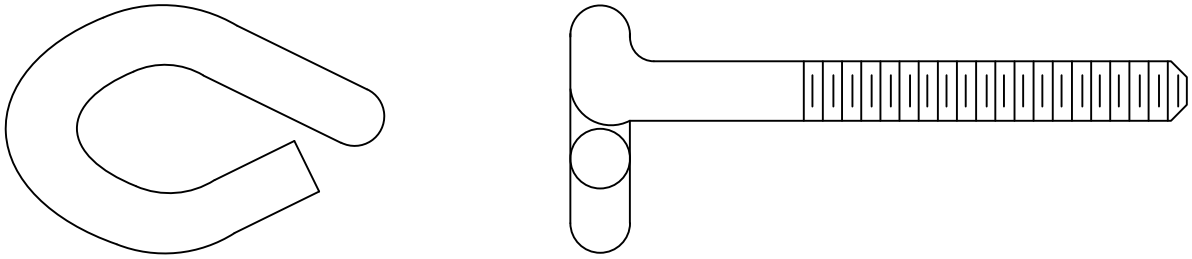
1. USE TWO HIGH-STRENGTH STEEL TIE-RODS AT END OF CASING.
2. TIE-ROD HOLE DIAMETER 1/8" LARGER THAN STUD DIAMETER.
3. BOTTOM EDGE OF ALL PLATES SHAPED TO FIT O.D. OF PIPE.
4. HARNESS LUGS AS PER AWWA MANUAL M-11.

COMBINATION FLANGED HARNESS LUG DETAIL

FIRESTONE COLORADO	WATER CONSTRUCTION DRAWINGS	BY: JME SCALE: NTS DATE: 1/2020	DRAWING: W24



PLAN



DETAIL

DIMENSIONS

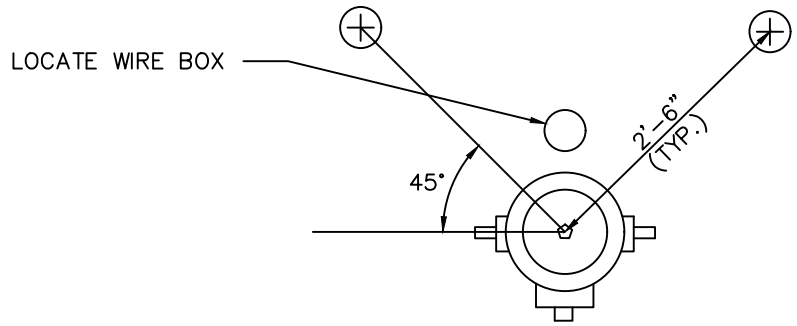
ALLOWABLE PIPE DIAMETER INCHES	BOLT SIZE	NO . OF BOLTS REQUIRED
4	3/4"	2
6	3/4"	2
8	3/4"	2
10	3/4"	4
12	3/4"	6

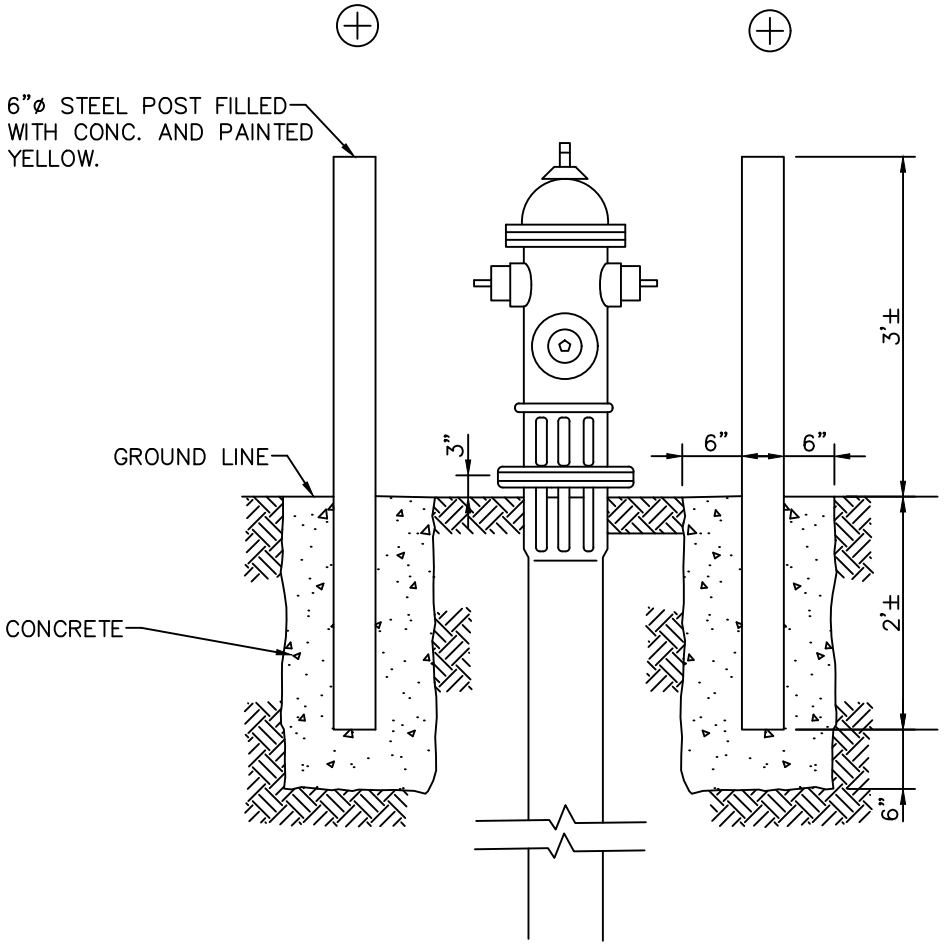
NOTES:

1. THE BOLT SHALL BE MANUFACTURED OF "COR-TEN" OR APPROVED EQUAL.
2. THE BOLT MAY BE HEAT TREATED.

JOINT RESTRAINT DETAIL

FIRESTONE COLORADO	WATER CONSTRUCTION DRAWINGS	BY: JME SCALE: NTS DATE: 1/2020	DRAWING: W25



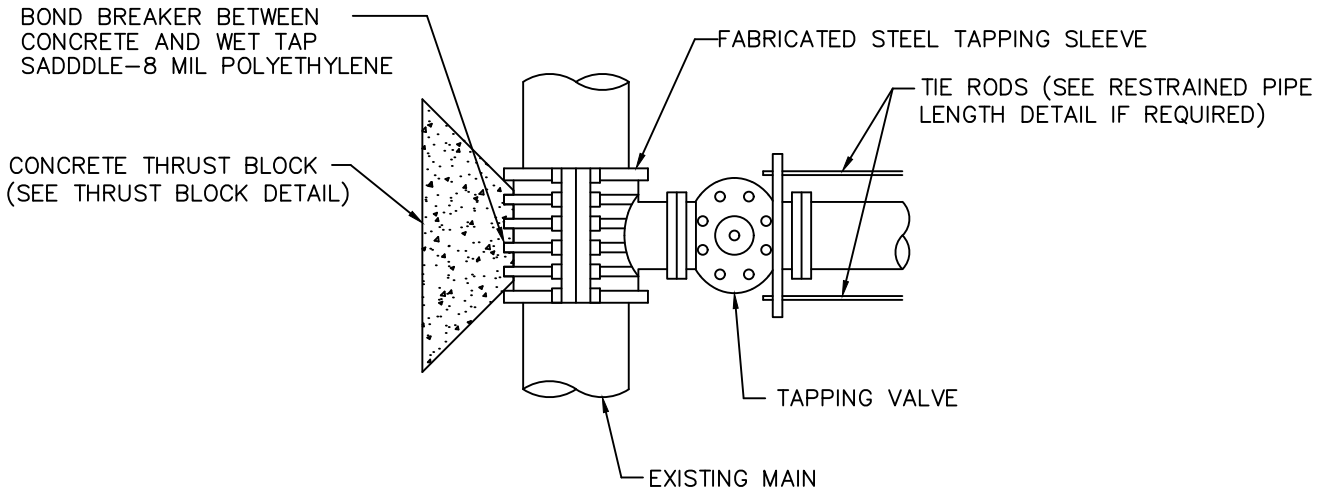


NOTES:

1. TO BE USED IN COMMERCIAL OR INDUSTRIAL AREAS WHERE HYDRANTS ARE UNPROTECTED FROM TRAFFIC FLOW.
2. STEAMER CONNECTION ON FIRE HYDRANT SHOULD FACE THE STREET.

FIRE HYDRANT GUARDS

FIRESTONE COLORADO	WATER CONSTRUCTION DRAWINGS	BY: JME SCALE: NTS DATE: 1/2020	DRAWING: W26



NOTES:

1. FABRICATED STEEL TAPPING SLEEVE SHALL BE:

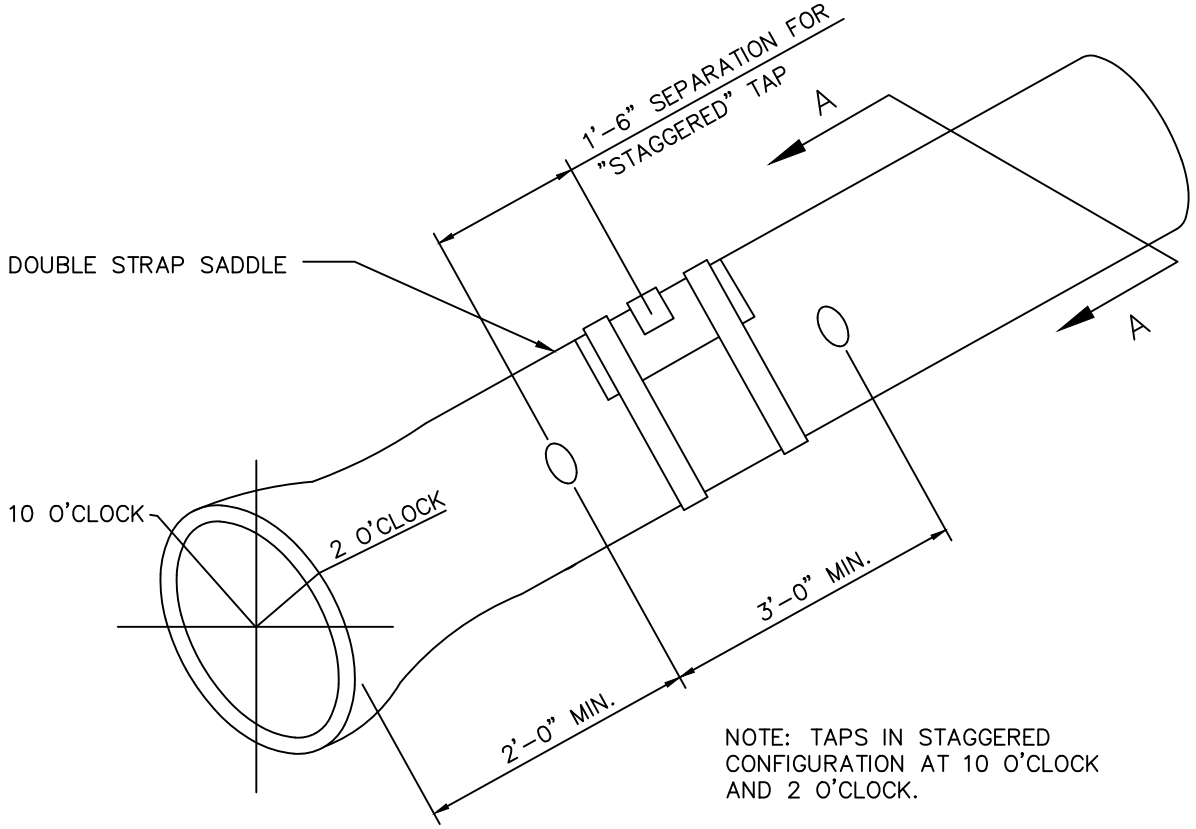
   ROMAC FTS419 OR APPROVED EQUAL TO BE USED FOR PVC UP TO 75% OF EXISTING MAIN

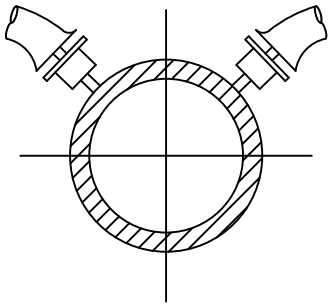
   ROMAC FTS420 OR APPROVED EQUAL TO BE USED FOR DIP UP TO 75% OF EXISTING MAIN

   ROMAC FTS425 OR APPROVED EQUAL TO BE USED ON ALL AC PIPE AND ANYTIME A BRANCH LINE IS GREATER THAN 75% OF EXISTING MAIN

TAPPING TEE AND VALVE

FIRESTONE COLORADO	WATER CONSTRUCTION DRAWINGS	BY: JME SCALE: NTS DATE: 1/2020	DRAWING: W27





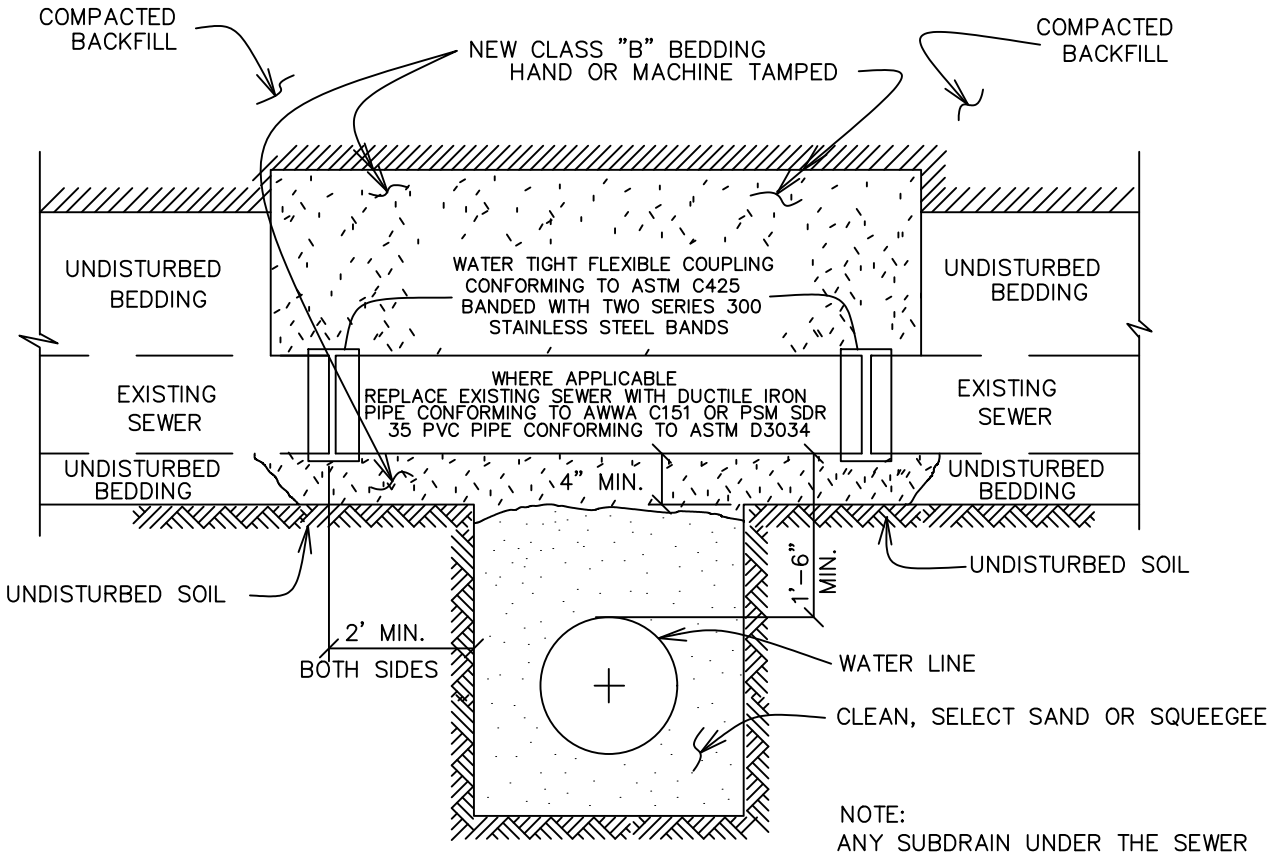
SECTION A-A

NOTE:

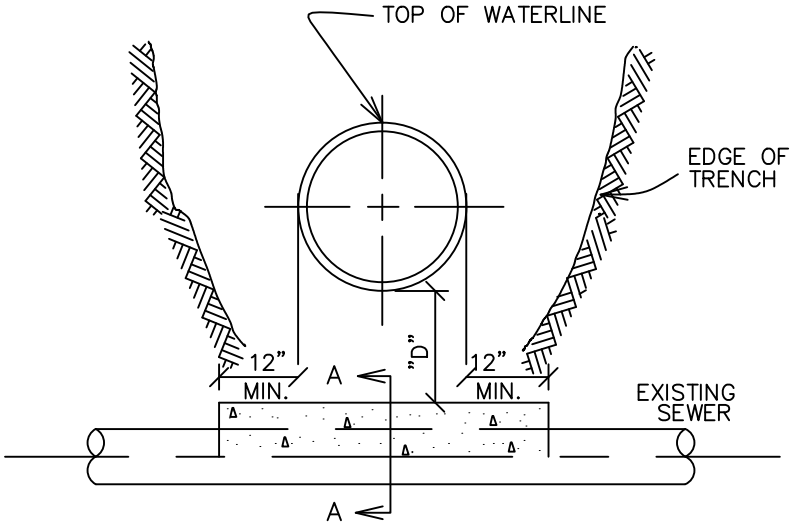
SERVICE TAP – WATER SERVICE TAP SHALL BE MADE AT EITHER THE 2 O'CLOCK OR THE 10 O'CLOCK POSITION ON THE CIRCUMFERENCE OF A WATER MAIN. THE MINIMUM DISTANCE BETWEEN A TAP MADE AT THE 2 O'CLOCK POSITION AND THE ONE MADE A THE 10 O'CLOCK POSITION SHALL BE 18" MEASURED ALONG THE PIPE. THE MINIMUM DISTANCE BETWEEN SUCCESSIVE TAPS MADE EITHER AT THE 2 O'CLOCK OR THE 10 O'CLOCK POSITION SHALL BE 3'. THE MINIMUM DISTANCE FROM EITHER THE BELL OR SPIGOT END OF A PIPE TO TAP SHALL BE 2'. A MAXIMUM OF 4 WATER SERVICE TAPS SHALL BE ALLOWED PER LENGTH OF PIPE. DOUBLE STRAP SADDLE (ROMAC 202B OR APPROVED EQUAL) SHALL BE USED FOR ALL SERVICE TAPS.

DOMESTIC WATER TAPPING DETAIL

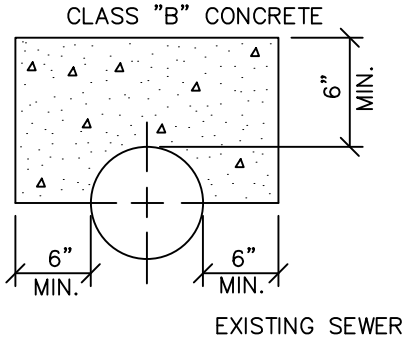
FIRESTONE COLORADO	WATER CONSTRUCTION DRAWINGS	BY: JME SCALE: NTS DATE: 1/2020	DRAWING: W28



NOTE:
ANY SUBDRAIN UNDER THE SEWER SHALL BE REPLACED SUCH THAT NO FLOW SHALL ENTER THE WATER LINE TRENCH.



SEWER CROSSING UNDER
WITH "D" LESS THAN 2'



SECTION A–A

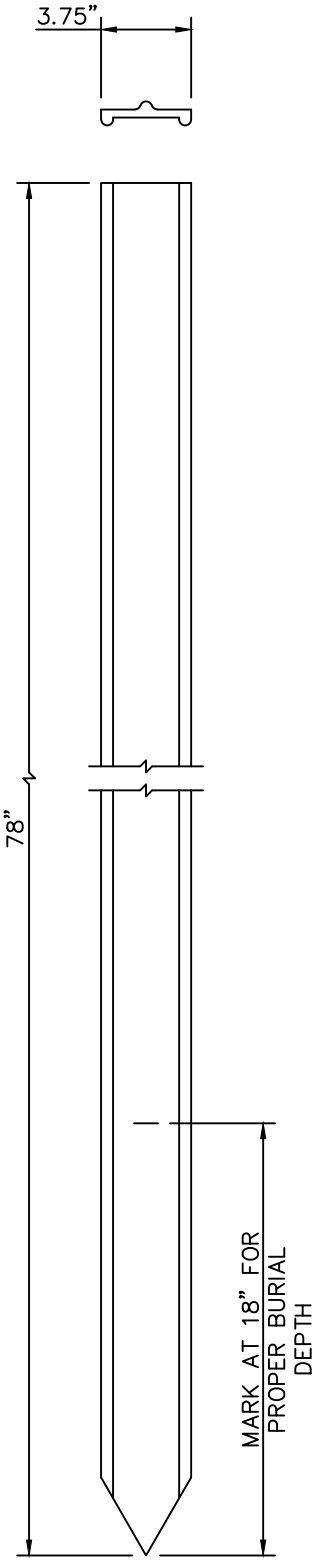
NOTE:

ALL EXISTING SEWER DAMAGED DURING INSTALLATION

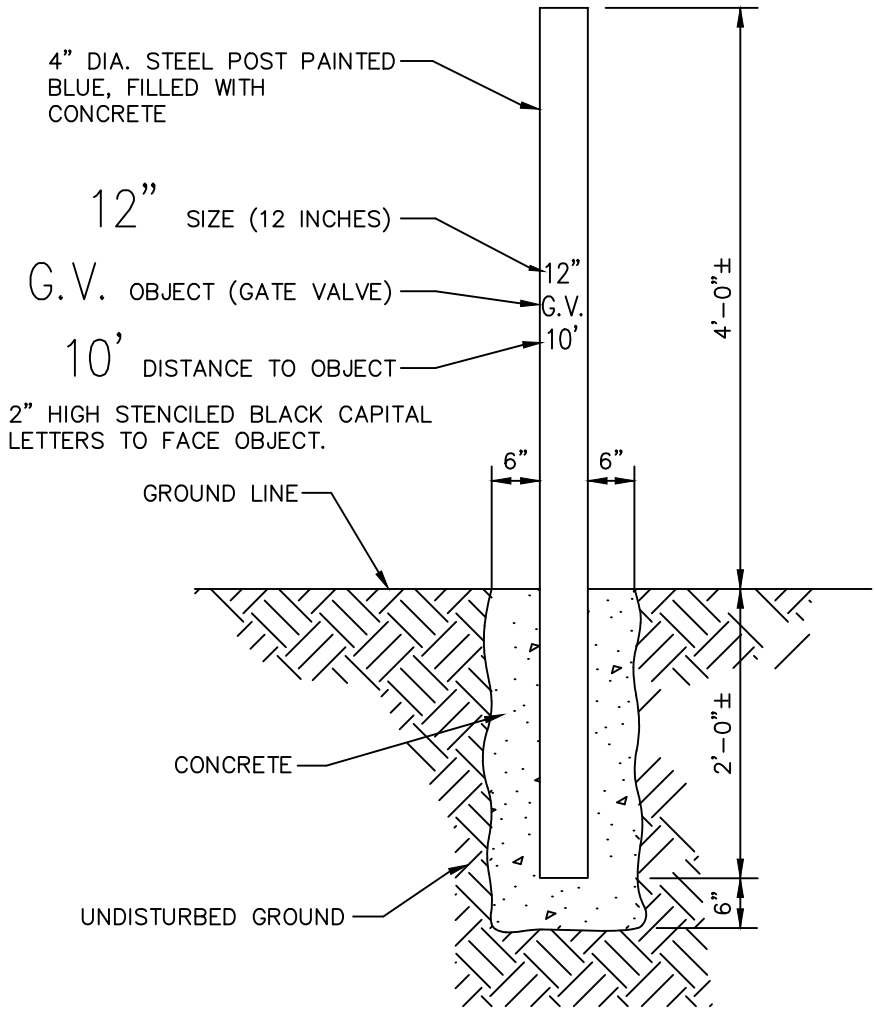
MUST BE REPLACED WITH PVC PIPE

CROSSING STORM AND SANITARY SEWERS

FIRESTONE COLORADO	WATER CONSTRUCTION DRAWINGS	BY: JME SCALE: NTS DATE: 1/2020	DRAWING: W29



FIBERGLASS MARKER POST



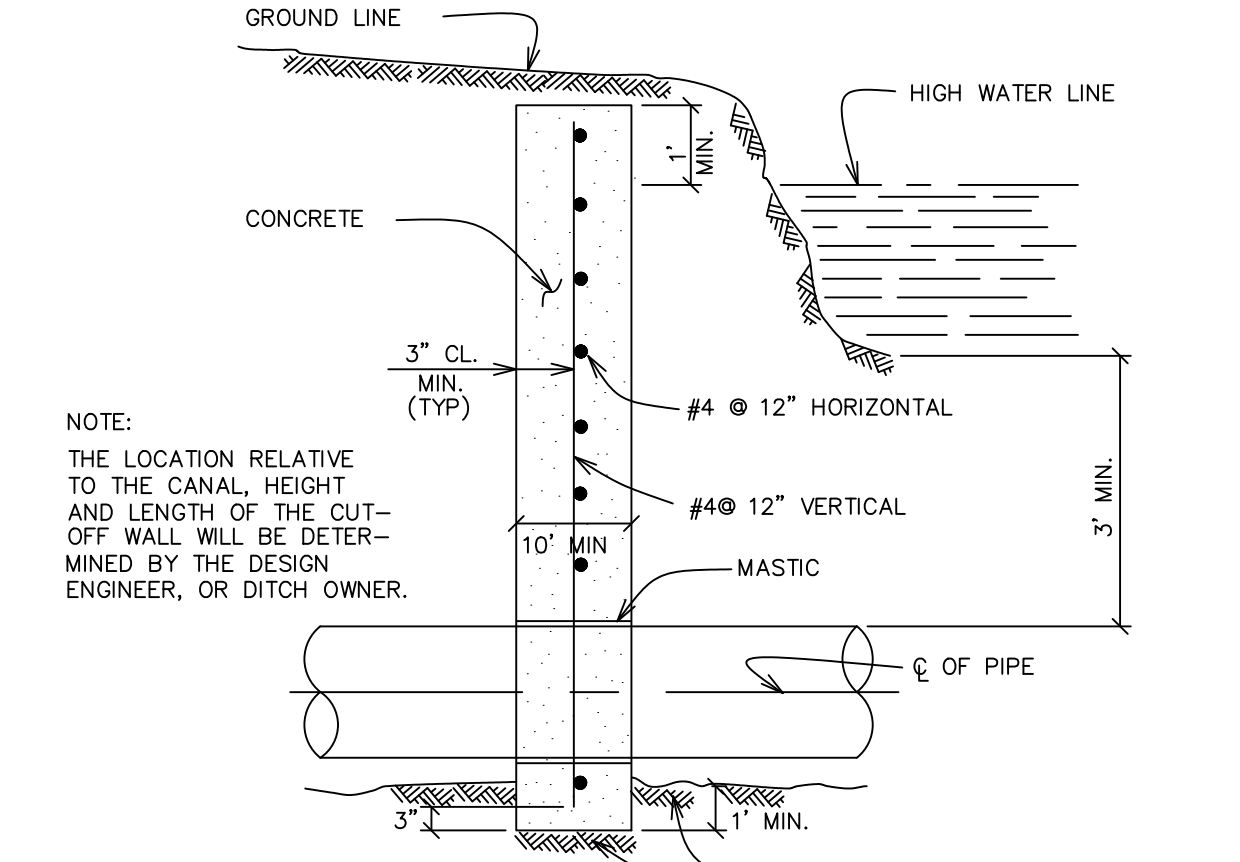
STEEL MARKER POST

NOTES:

1. FIBERGLASS MARKER POST SHALL BE CARSONITE CUM-375 OR EQUAL IWTH ANCHORS AND APPROPRIATE DECALS FOR WATER.
2. COLOR FOR WATER – BLUE
3. COLOR FOR NON-POTABLE – PURPLE

MARKER POST

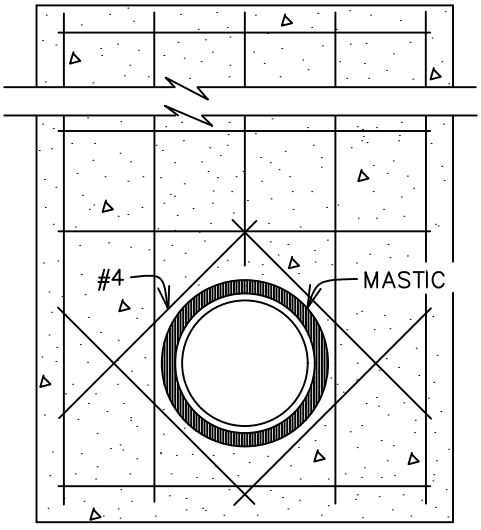
FIRESTONE COLORADO	WATER CONSTRUCTION DRAWINGS	BY: JME SCALE: NTS DATE: 1/2020	DRAWING: W30



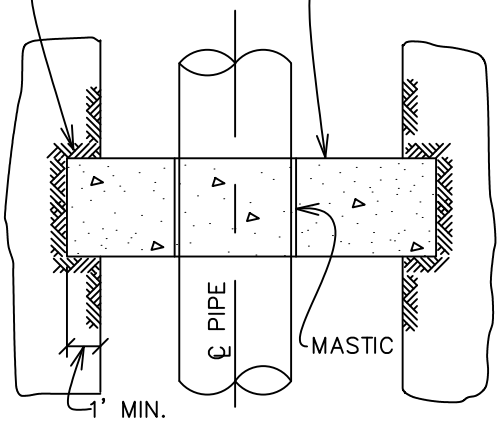
NOTE:

THE LOCATION RELATIVE TO THE CANAL, HEIGHT AND LENGTH OF THE CUT-OFF WALL WILL BE DETER-MINED BY THE DESIGN ENGINEER, OR DITCH OWNER.

SIDE VIEW



FRONT VIEW



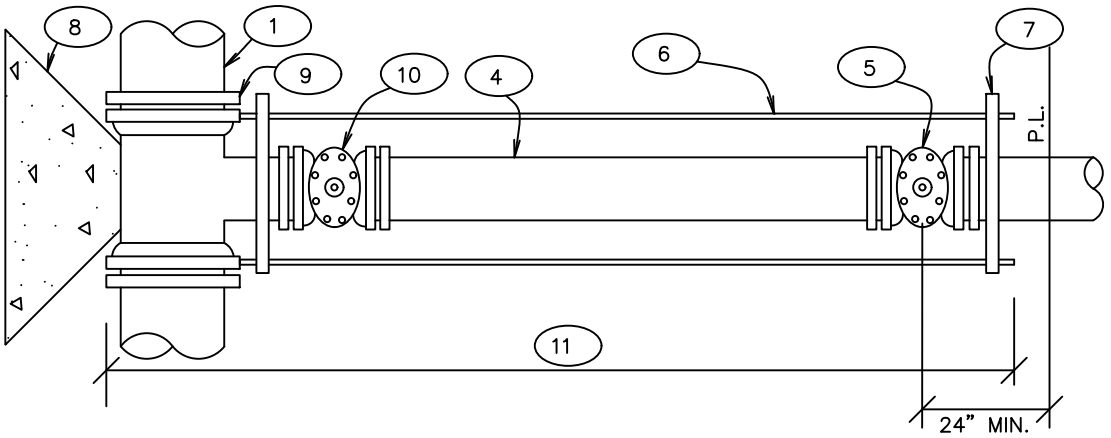
TOP VIEW

NOTE:

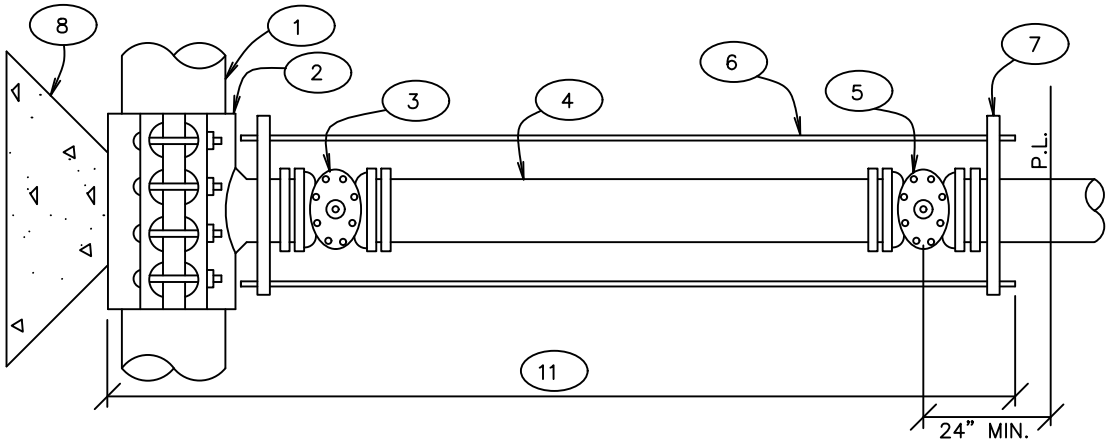
REINFORCEMENT NOT SHOWN.

TYPICAL CUTOFF WALL FOR DITCH CROSSING

FIRESTONE COLORADO	WATER CONSTRUCTION DRAWINGS	BY: JME SCALE: NTS DATE: 1/2020	DRAWING: W31



FIRELINE OR DOMESTIC CONNECTION WITH MAIN EXTENSION

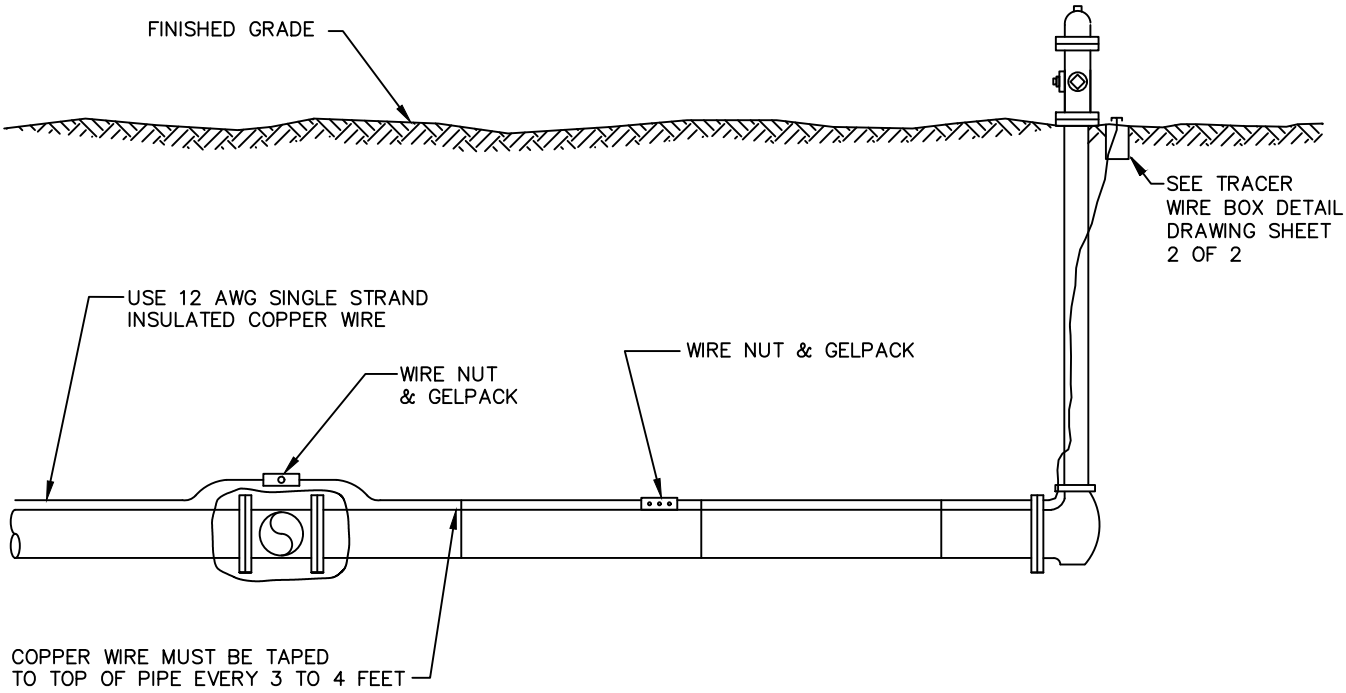


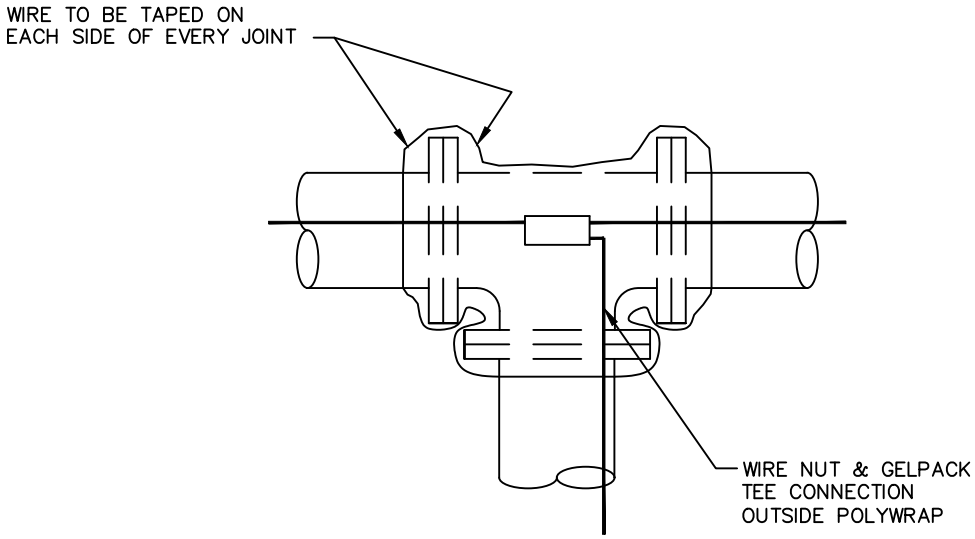
FIRELINE OR DOMESTIC CONNECTION

1. EXISTING MAIN
2. TAPPING SLEEVE
3. TAPPING VALVE
4. DOUBLE SPIGOT PIPE
5. PROPERTY LINE VALVE
6. TIE RODS (MEGALUGS MAY BE USED IN PLACE OF RODDING.)
7. PIPE CLAMP
8. CONCRETE KICKBLOCK
9. M.J. ANCHORING TEE (SWIVEL TEE WHERE APPLICABLE)
10. M.J. VALVE
11. POLYETHYLENE WRAPPED

2" AND LARGER DOMESTIC AND FIRELINE CONNECTIONS

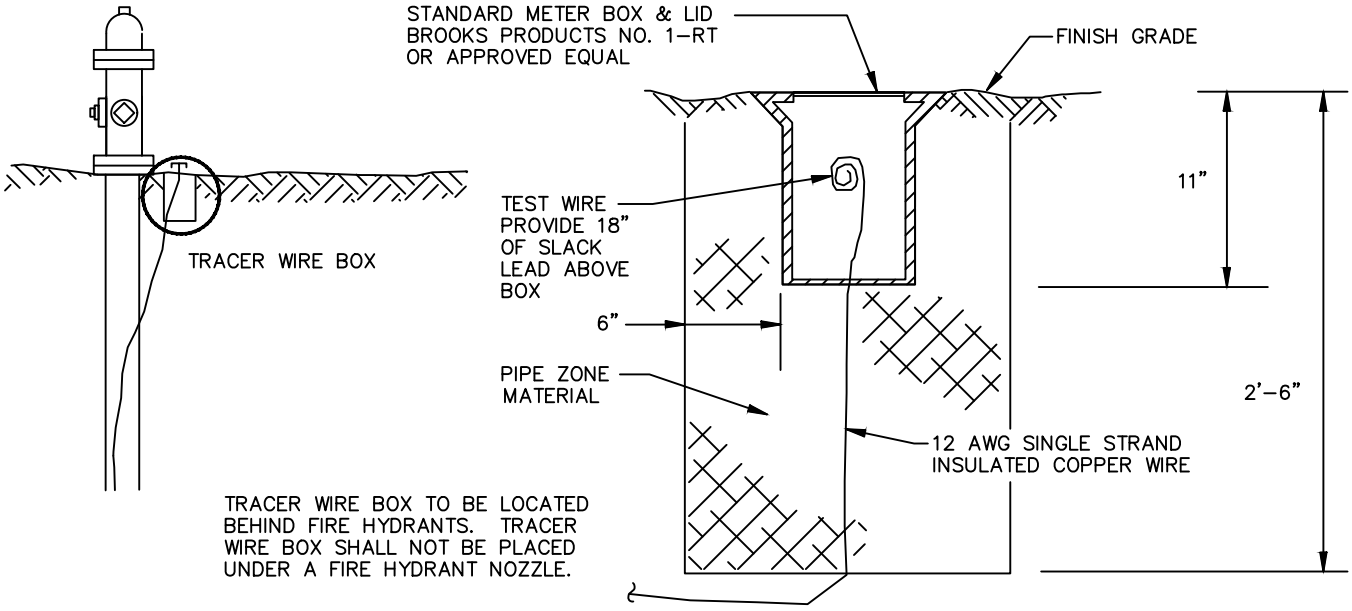
FIRESTONE COLORADO	WATER CONSTRUCTION DRAWINGS	BY: JME SCALE: NTS DATE: 1/2020	DRAWING: W32



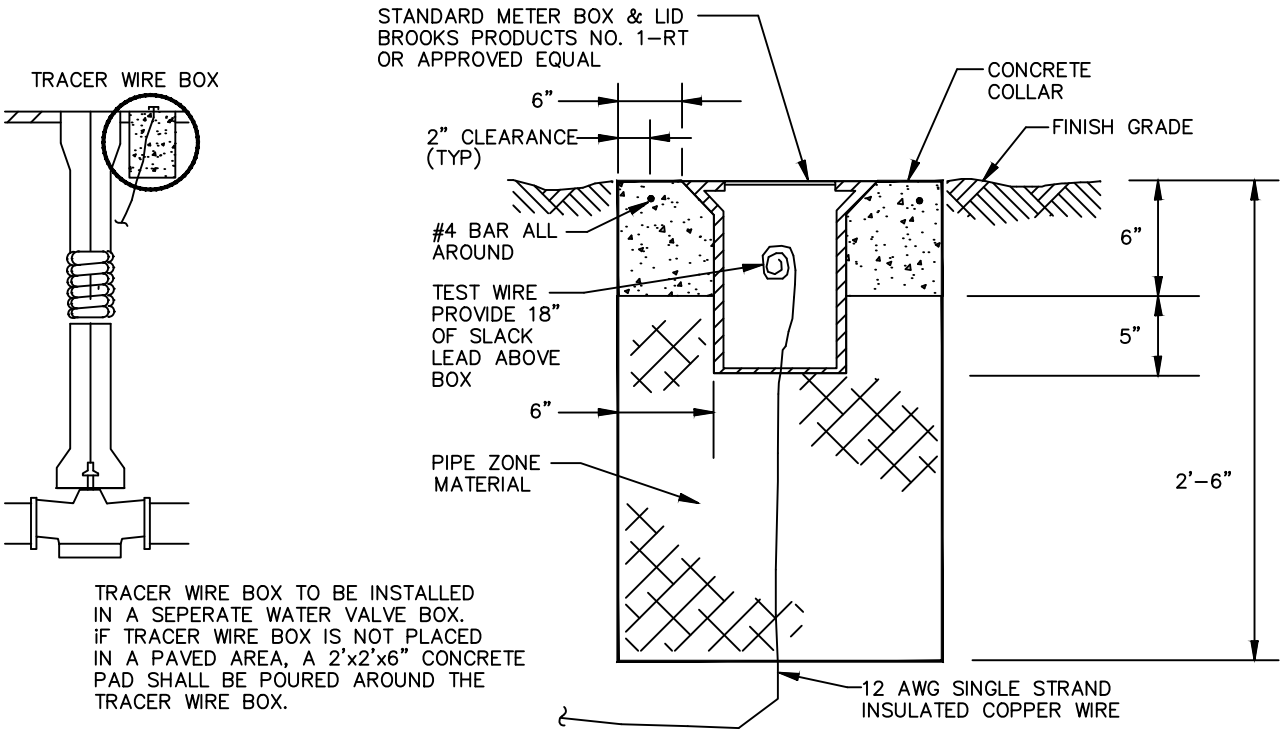


TRACER WIRE (1 OF 2)

FIRESTONE COLORADO	WATER CONSTRUCTION DRAWINGS	BY: JME SCALE: NTS DATE: 1/2020	DRAWING: W33A



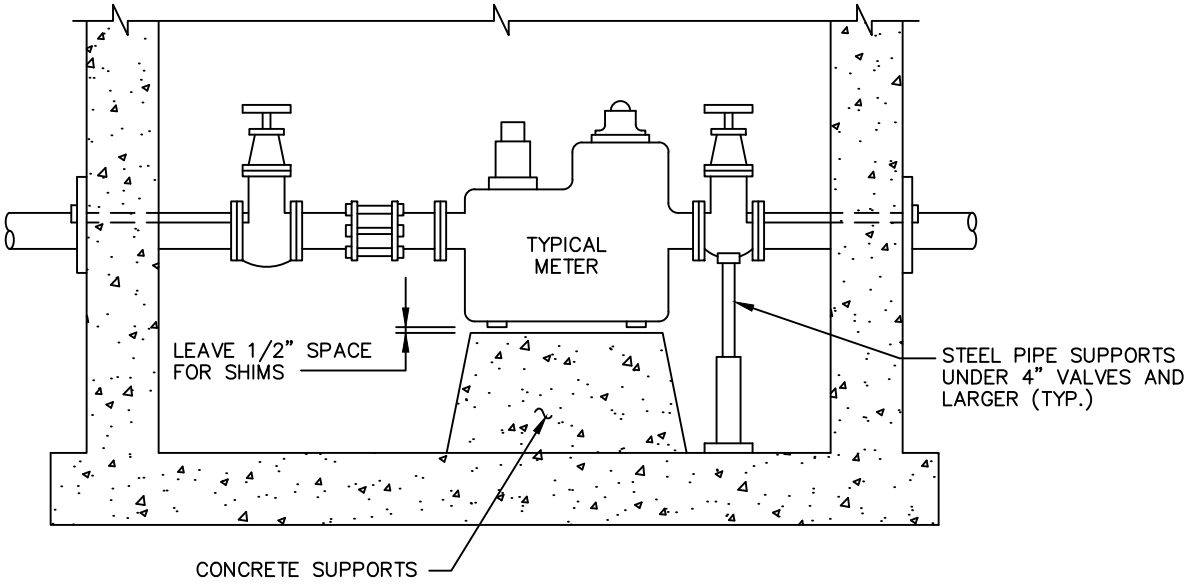
TRACER WIRE BOX AT FIRE HYDRANT



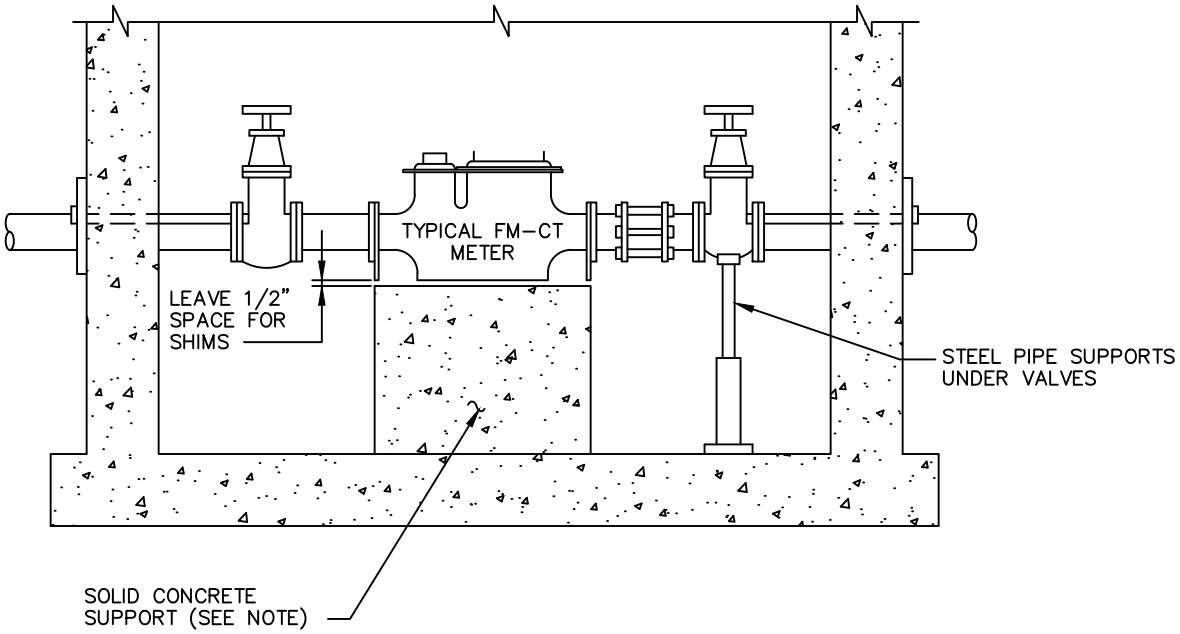
TRACER WIRE BOX FOR AREA WITH NO FIRE HYDRANT

TRACER WIRE (2 OF 2)

FIRESTONE COLORADO	WATER CONSTRUCTION DRAWINGS	BY: JME SCALE: NTS DATE: 1/2020	DRAWING: W33B



TYPICAL CONCRETE METER SUPPORTS
FOR 2", 3", 4", 6", 8", & 10" METERS



TYPICAL CONCRETE METER SUPPORTS
FOR F.M.-C.T. METERS

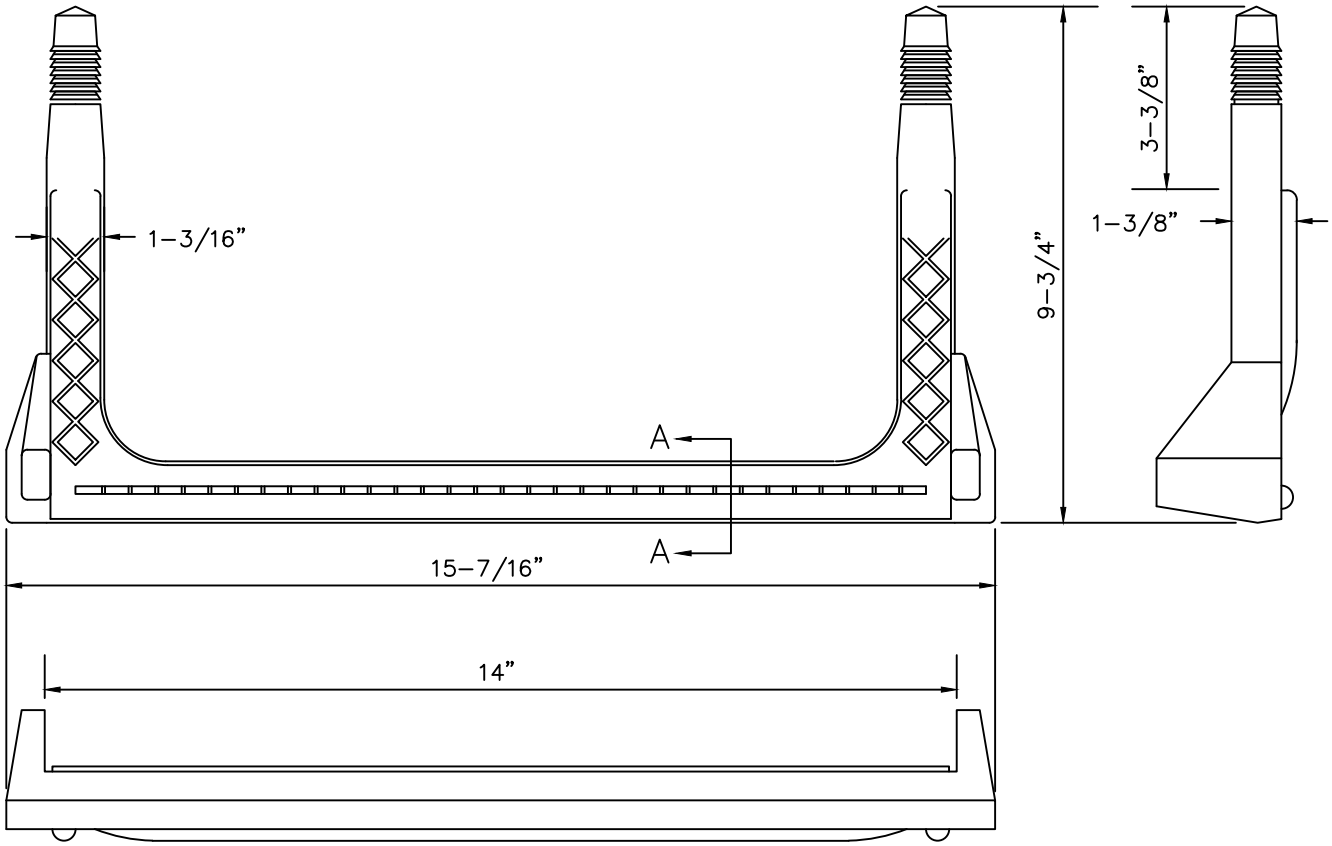
NOTE:
SOLID CONCRETE BASE EXTENDS UNDER THE FM-CT METER BY PASS FOR 6", 8", AND 10".

SIZE OF CONCRETE SUPPORT

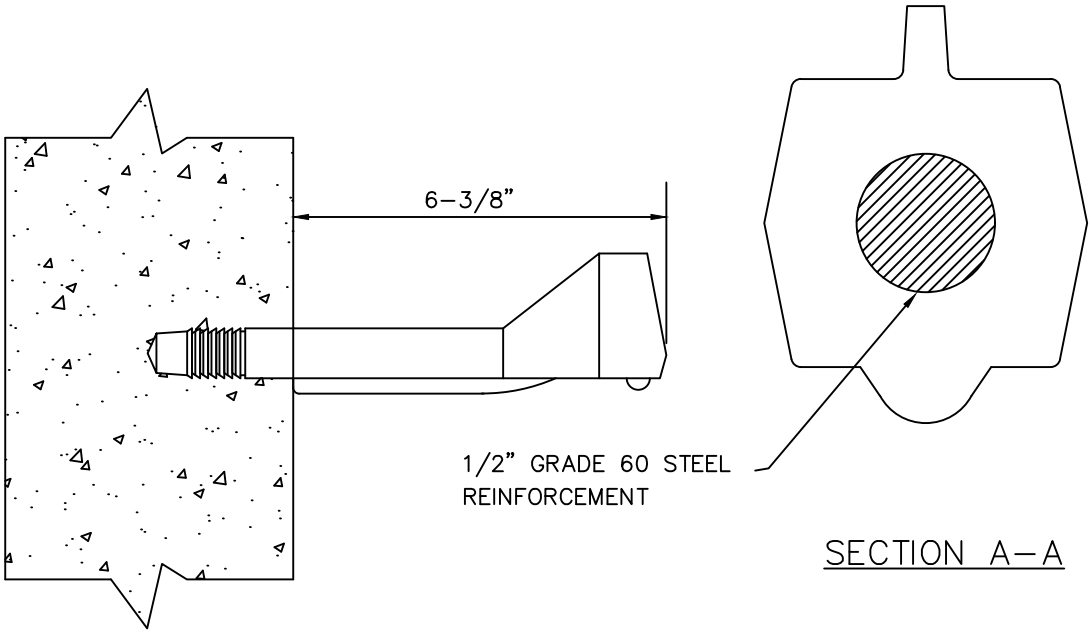
6" FM-CT	W=3'-9"	L=3'-0"
8" FM-CT	W=4'-5"	L=3'-8"
10" FM-CT	W=5'-8"	L=4'-8"

CONCRETE METER SUPPORTS

FIRESTONE COLORADO	WATER CONSTRUCTION DRAWINGS	BY: JME SCALE: NTS DATE: 1/2020	DRAWING: W34



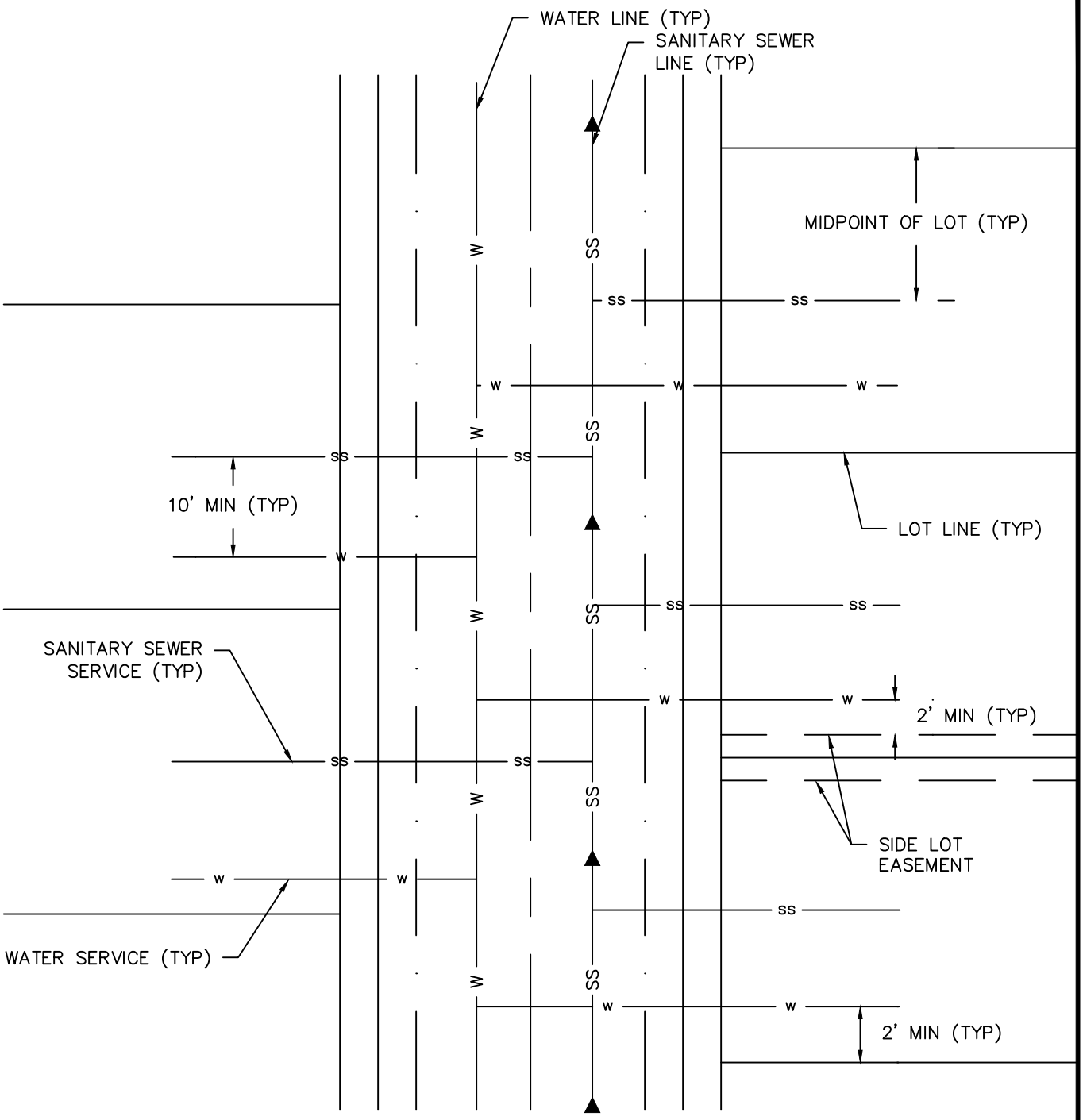
COPOLYMER POLYPROPYLENE PLASTIC



SECTION A–A

PLASTIC STEP

FIRESTONE COLORADO	WATER CONSTRUCTION DRAWINGS	BY: JME SCALE: NTS DATE: 1/2020	DRAWING: W35

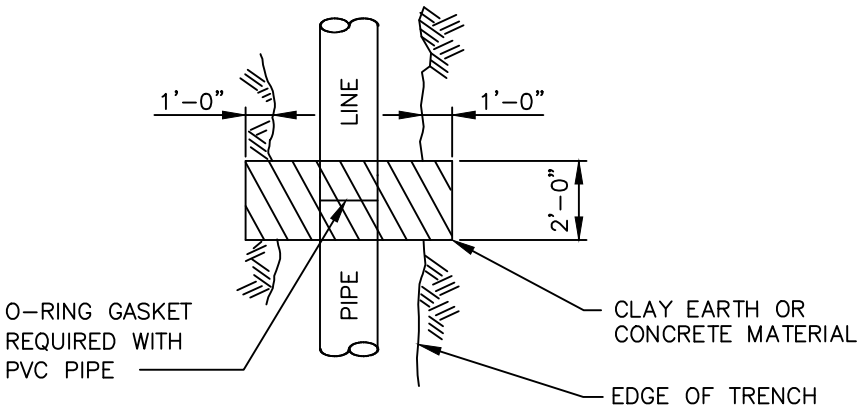


NOTES:

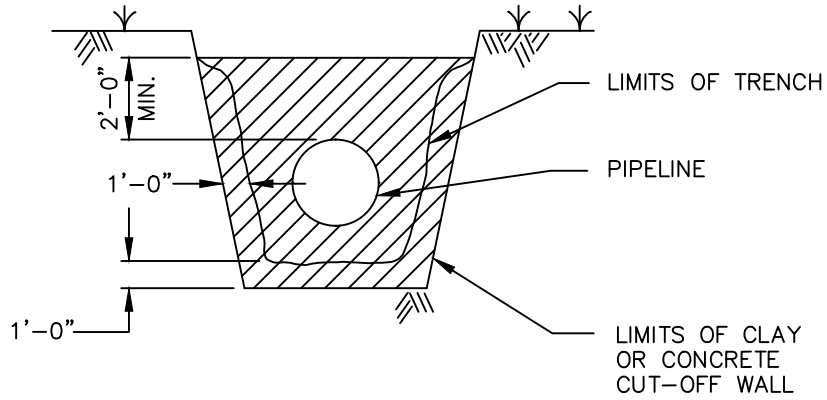
1. SANITARY SEWER SERVICES SHALL BE INSTALLED IN THE CENTER OF THE LOT PER THE ST. VRAIN SANITATION DISTRICT STANDARDS.
2. WATER SERVICES SHALL BE INSTALLED A MINIMUM OF 10 FEET FROM THE SEWER SERVICE.
3. WATER SERVICES SHALL NOT BE LOCATED UNDER DRIVEWAYS.
4. STAMP AN "S" AND A "W" IN THE FACE OF CURB (4" HEIGHT) AT THE LOCATION OF THE WATER AND SANITARY SEWER SERVICE LOCATIONS, "S" FOR SEWER AND "W" FOR WATER.

WATER AND SEWER SERVICE LOCATIONS

FIRESTONE COLORADO	WATER CONSTRUCTION DRAWINGS	BY: JME SCALE: NTS DATE: 1/2020	DRAWING: W36



PLAN



SECTION

NOTES:

1. CLAY OR CONCRETE WALL EXTENDS A MINIMUM OF 12" INTO UNDISTURBED SOIL ON EACH SIDE AND ON BOTTOM OF TRENCH.
2. CLAY MATERIAL TO BE CLASSIFIED AS CL, CH OR OH.
3. APPROVED FLOW-FILL MATERIAL MAY BE USED INSTEAD OF CLAY MATERIAL.

CLAY OR CONCRETE CUT-OFF WALL

FIRESTONE COLORADO	WATER CONSTRUCTION DRAWINGS	BY: JME SCALE: NTS DATE: 1/2020	DRAWING: W37

GENERAL METER NOTES

1. LOCATION OF THE METER TO BE ESTABLISHED BY THE DEVELOPMENT ENGINEER.
2. ALL SETTINGS MUST BE INSPECTED BY THE RESIDENT PROJECT REPRESENTATIVE.
3. IF THE STREET OR GROUND IS NOT TO OFFICIAL GRADE AT THE TIME OF INSTALLATION OF THE METER, THE OWNER MUST RAISE OR LOWER THE METER VAULT WHEN THE FINAL GRADE IS ESTABLISHED.
4. LEADED JOINTS AND GALVANIZED PIPING SHALL NOT BE ALLOWED INSIDE THE METER VAULTS.
5. A BYPASS IS TO BE INSTALLED ON 1–1/2" AND LARGER METERS UNLESS OTHERWISE SPECIFIED.
6. THE SERVICE LINE THROUGH AND ON BOTH SIDES OF THE METER PIT MUST BE OF THE SAME MATERIAL.
7. NO CONNECTIONS SHALL BE MADE IN THE METER PIT. SPRINKLER CONNECTIONS MUST BE MADE MORE THAN FIVE (5) FEET FROM THE METER PIT ON THE DOWNSTREAM SIDE.
8. GATE VALVES:

   A. ALL GATE VALVES UNDER 3" FOR USE W/COPPER PIPE SHALL BE ALL BRONZE, W/ NON–RISING STEMS AND SOLID WEDGE DISC, MANUFACTURED IN ACCORDANCE WITH A.S.T.M. SPEC. B62 AND FEDERAL SPEC. W.W.–V–54 CLASS A, 125PSI W.S.P., 200PSI W.O.G. OR CURB STOPS IN ACCORDANCE WITH AWWA C800 AND MS–23 OF THE MATERIAL SPECIFICATIONS.

   B. ALL GATE VALVES 3" AND LARGER SHALL CONFORM WITH THE TOWN OF FIRESTONE'S STANDARD SPECIFICATIONS.

9. ALL DRESSER (OR APPROVED EQUAL) COUPLINGS SHALL HAVE THE PIPE STOP REMOVED.

WATER METER NOTES

FIRESTONE COLORADO	WATER CONSTRUCTION DRAWINGS	BY: JME SCALE: NTS DATE: 1/2020	DRAWING: W38